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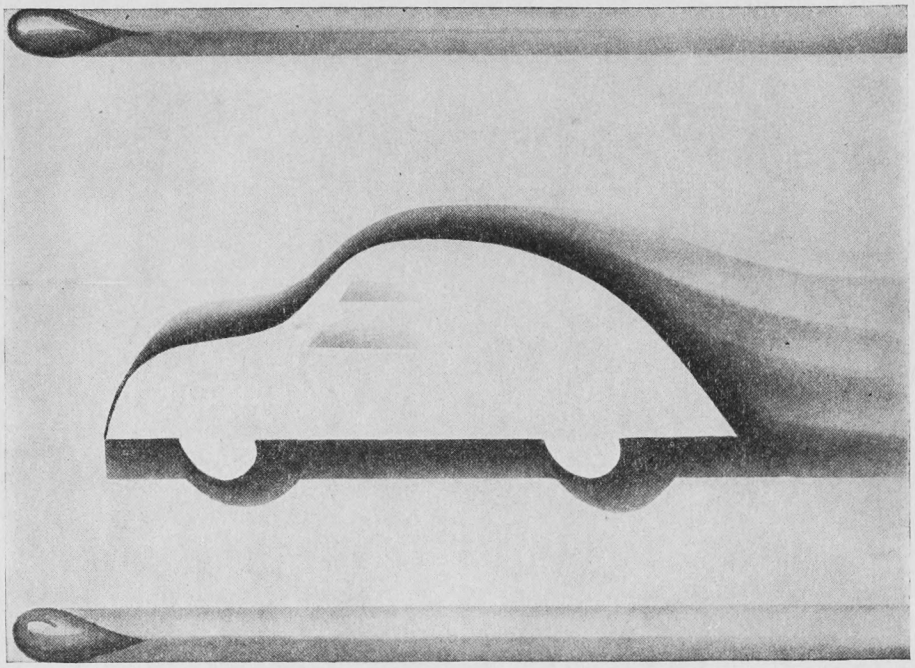

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Editor—C. W. MacCHARLES, M.D. (Man.)
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Business Manager—J. GORDON WHITLEY

Cardiovascular Emergencies

Notes on Diagnosis and Treatment

—*By*—

JOHN M. McEACHERN, M.D., F.R.C.P. (C.)

Lecturer in Medicine, University of Manitoba
Assistant Physician, Winnipeg General Hospital.

Cardiovascular emergencies often call for urgent and heroic treatment and, since the practitioner has little time in which to think and act, this short summary may be of timely interest.

A study of table one will show some of the cardiovascular conditions demanding, at times, emergency treatment.

TABLE ONE

Acute Cardiovascular Emergencies.

1. Acute Cardiac Failure.
   (a) Right ventricular failure.
   (Venous congestive type)
   (b) Left ventricular failure.
   (Pulmonary-cerebral type)
   (c) Auriculo-ventricular failure.
   1. Heart block (Stokes Adams syndrome)
   2. Syncope due to extrasystoles
   (senile type)
2. Coronary thrombosis.
3. Angina Pectoris.
4. Paroxysmal fibrillation or flutter.
   (With or without angina at onset)
5. Paroxysmal Tachycardia.
   1. Supraventricular type
   2. Ventricular type
6. Acute Pericarditis.
7. Cardiac Standstill.
8. Embolism from diseased heart.
9. Syncope.
   (a) Vaso vagal attacks
   (b) Aortic Regurgitation

This is a formidable list and only a few of the more common conditions shall be discussed here, the treatment of the less common emergencies being merely tabulated.

Acute Cardiac Failure

The left half of the heart drives the blood through the greater circulation, hence the left ventricle is twice the thickness of the right. Should one ventricle fail, stasis occurs either in front or behind it. Should the left ventricle throw out one c.c. less per beat than the right, acute pulmonary oedema may occur. On the other hand, should the right heart fail, visceral venous congestion is the rule. Conditions giving rise to right ventricular failure are, mitral stenosis, chronic bronchitis, emphysema, pulmonary fibrosis and certain congenital defects. Coronary sclerosis, thrombosis, hypertension and aortic valvular lesions may give rise to left ventricular failure. In some cases both right and felt ventricles may fail concurrently.

Acute Right Ventricular Failure

This is the type of venous congestive failure with which we are all familiar, there being turgid, distended veins, best seen in the neck, rales at the lung bases, an enlarged tender liver, oedema, or anasarca. If the condition is acute in onset, or if in a chronic case the patient is in extremis, heroic measures are indicated. Treatment is first directed toward the relief of the venous congestion. If no previous digitalis has been given, miraculous results are often obtained by giving ¼ mg. or 1/240 grain stropanthin* (ouabaine, Arnaud) intravenously. Marked relief is obtained in many cases within twenty minutes of the injection. Massive doses of digitalis (preferably the dried leaf) up to two minums per pound of normal weight are now given over a period of 24 to 36 hours at 6 hour intervals. In cases with persistent vomiting and enlarged liver, it may be necessary to give the digitalis by rectum or intramuscularly. In the types of failure associated with auricular fibrillation, diuretics other than digitalis are rarely necessary, but in the type superimposed upon a chronic failure of the left ventricle and with regular rhythm, it is wise to begin giving salyrgan early in the treatment. This mercurial diuretic is given in 2 c.c. doses intravenously. In emergencies it is rarely necessary to try a preliminary ½ c.c. test dose, nor is ammonium chloride essential here. Other measures of importance are the mechanical removal of large serous effusions, and the assurance of sleep and rest, this being best obtained by the use of morphine or chloral hydrate. Progress is judged by watching the veins, the lungs, the liver and the extremities, rather than the heart. If fibrillation is present, the rapid approximation of the apex and pulse rate under digitalis therapy is a valuable sign. The intake of fluid and salt is restricted.** The urinary output and the weight of the patient are checked daily in order to estimate the effect of diuretics. More important still, one must chart the hours of sleep, at least six hours daily being the minimum requirement. In elderly patients with prostatic trouble, it is well not to overlook a distended bladder as this may prevent diuresis.

TABLE TWO

Acute Left Ventricular Failure, Symptoms and Signs.

1. Previous History (not always available).
   (a) Previous attacks of cardiac asthma, cheyne stokes complex, progressive dyspnoea on exertion, sleeplessness, and an underlying condition suggesting left ventricular strain.
2. Symptoms and Signs.
   (a) **Profound dyspnoea of sudden onset.**
   (b) Sweating and cold extremities.
   (c) Weakness.
   (d) Ashen gray cyanosis.
   (e) Rapid thready pulse, 140 or more per minute.
   (f) **Gallop rhythm at apex.**
   (g) **Acute pulmonary oedema.** [asthma.
   (h) **Rapid respirations always present, cardiac**
   (i) Drop in blood pressure.
   (j) **Weak and distant heart sounds.**
   (k) **Pulsus alternans.**
   (l) **Accentuated pulmonic second sound.**
   (m) Tic tac rhythm.
   (n) **Absence of mitral or pulmonary disease.**
   (o) **Increased hilus density in x-ray.**

Acute Left Ventricular Failure

Some of the symptoms and signs of this type of failure are outlined in table two. In addition to this acute variety, certain cases of subacute left ventricular failure have short attacks of cardiac asthma or acute oedema of the lungs. There is rarely any shock associated with these attacks and morphine gr. ¼ or morphine and atropine act almost as a specific here. A dry, salt poor diet, digitalization and the periodical administration of 2 c.c. of salyrgan (a point stressed by Dr. Gilmour of our University) will often prevent recurrence of the attacks for long periods. The salyrgan apparently relieves the latent pulmonary oedema in these cases. Many of the symptoms of the acute left ventricular type are those of peripheral failure (shock) but signs of associated acute pulmonary failure point to the left ventricular origin. Such attacks are often precipitated, in the presence of left ventricular strain, by severe emotional upsets. More commonly, with the same factors present they follow serious operations, labor, paroxysmal tachycardia, coronary thrombosis and as a terminal extent in hypertension particularly with the malignant type or glomerular nephritis. In our experience the treatment of this acute type of failure suggests rather a hopeful outlook. Too often in the past have we said in post-operative cases, "the heart failed." With energetic and properly directed treatment many of these lives may be saved and in our series of some seventeen cases during the past six months, this view has been well substantiated.

A brief summary of suggested treatment directed towards the relief of acute pulmonary congestion and peripheral vascular failure may be seen in table three.

TABLE THREE

Treatment of Acute Left Ventricular Failure.

1. Euphyllin (aminophyllin N.N.R.) (gr. 1½ in 10 c.c. ampoule intravenously, to be repeated at intervals).
2. Rapid digitalization by the intravenous and intramuscular route. (Suggested routine, stropanthin* gr. 1/240 (¼mg.) intravenously and 2 minums per pound of body weight of digitalis (ampoules) intramuscularly within 12 hours).
3. 200 c.c. of 25% glucose, intravenously, to be repeated at intervals. Large amounts of fluid are extremely dangerous.
4. Oxygen by nasal catheter.
5. Venesection and tourniquets on legs and arms have also been recommended.
6. After the acute symptoms have subsided, a dry salt poor diet, maintenance doses of digitalis and the periodical administration of salyrgan are indicated.

* ¼ mg. stropanthin is equivalent to 30 minums of digitalis.

** Repeated small (100-200 c.c.) intravenous injections of 25% glucose are of undoubted value here.

N.B. If the left ventricular failure is due to coronary thrombosis, stropanthin and venesection are contraindicated.

Space will not permit even a brief discussion of the remaining cardiovascular emergencies. These are accordingly summarized in table form.

Treatment of Coronary Thrombosis.

1. Morphine gr. ½ and repeat in an hour or so if necessary. (It may be necessary to give this intravenously for immediate effect).
2. Intravenous glucose 200 c.c. of 25% solution to be repeated at intervals.
3. Digitalis is contraindicated except in the presence of right or left ventricular failure or auricular fibrillation.
4. Nitrites are positively dangerous in this condition as they increase the thrombotic tendency and tend to lower the blood pressure.
5. Quinidine sulphate gr. 2 daily is advocated as a preventative of ventricular fibrillation (a common cause of sudden death in these cases).
6. Coronary-vasodilators such as caffeine sodium benzoate, theobromine, euphyllin or aminophyllin (N.-N.R.) are advised by some authorities and one hesitates to withhold them in view of experimental work already done.
7. Oxygen is of value (nasal catheter route) during the acute stage but must be withdrawn slowly.
8. These patients should be kept at rest for at least six weeks.

Treatment of Angina Pectoris.

For the relief of the pain of angina the nitrites have been used for decades and are most effective particularly in the form of nitroglycerine gr. 1/100 under the tongue. A point of importance here is that the product deteriorates on exposure to air. A much older remedy is neat whiskey and brandy and this according to Paul White, equals the nitrites in efficiency. Other procedures which meet with success at times are the administration of CO 2, and oxygen and the intravenous injection of euphyllin (aminophyllin N.N.R.).

Paroxysmal tachycardia is the sudden onset of a rapid regular tachycardia (150-200 per minute lasting from a few minutes up to a week).

Treatment of the Supraventricular Type of Paroxysmal Tachycardia.

1. Reassurance is most important, as this type is rarely associated with organic disease and the paroxysms are for the most part self limited.
2. Vagal pressure (unilateral pressure over carotid sinus) may terminate the attack.
3. Ergotamine tartrate (gynergen) a 2 c.c. ampoule is effective in some cases.
4. Mecholin. (Acetyl beta methyl cholin) 20 to 30 mg. intramuscularly. This has immediately stopped 24 attacks in Starr's experience.
5. Quinidine sulphate 5 - 10 grains at four hour intervals until forty grains have been given, is occasionally effective.
6. Morphine may terminate the attack but should not be used till other methods fail.

The ventricular type is so rare and the associated cardiac disease so serious, that treatment is of little avail.

Heart Block and Stokes Adams Syndrome. Adrenalin has been found most effective during the syncopal attack. Ephedrin, gr. ¾ and barium chloride gr. ss three times a day have been found effective in preventing the attacks.

Cardiac Standstill. This catastrophe occurs at times during anæsthesia and the insertion of a curved needle with or without adrenalin, into the auricle has initiated the cardiac impulse in some cases. More recently a well-known electrical company has developed an artificial pacemaker which attached to the above needle administers mild stimuli at regular rates of 60 to 100 a minute. In animals and in some human cases this remarkable instrument has initiated normal rhythm after 7 to 10 minutes of complete standstill.

Paroxysmal Fibrillation or Flutter. Such attacks are usually of short duration and are self limited. If, however, the condition persists, in the case of fibrillation, quinidine therapy must be begun, provided no congestive heart failure is present. Quinidine sulphate grains 5 is given three times a day until 40 - 50 grains have been given, when the drug is withdrawn. It is necessary to watch carefully for symptoms of cinchonism. In many cases normal rhythm will ensue. In auricular flutter which persists more than a day or two it is necessary to digitalize the patient up to the point of tolerance and even beyond. On withdrawal of the digitalis the flutter will often revert to fibrillation. In about 50% of these cases the fibrillation can now be changed to normal rhythm through the use of quinidine. The shorter paroxysms of fibrillation or flutter may often be prevented by the use of small doses (gr. 2) of quinidine.

Other conditions at times requiring emergency treatment are, syncope due to extrasystoles, acute pericarditis, embolism and cardiac syncope, but in a short summary of this nature it is impossible to discuss these in detail.

In conclusion it is hoped that some aspects of the emergency treatment of cardiovascular accidents have been clarified. Too often, with only one weapon in our armamentorium (such as the popular digitalin), are we content to say "the patient would have died anyway!"

OBITUARY

DR. JOHN ALBERT CHRISTILAW

Dr. John Albert Christilaw, a resident of St. James for the past 10 years, died January 23 at his home, 195 Lyle St., aged 61 years. Prior to his residence in St. James he had practiced his profession at Treherne, Man. Besides his widow and daughter, Blanche, who live at home, one son, Emerson, of Brandon, survives.

Dr. Christilaw graduated from the Faculty of Medicine, University of Manitoba, in 1915.

*The Medical Life of Henry the Eighth

LYON H. APPLEBY, M.D., F.R.C.S. Eng., F.R.C.S. Canada
Vancouver, B.C.

The medical life of Henry VIII cannot be divorced from a consideration of his kingship and of his times, nor can he be considered apart from his fellow monarchs, their courts, intrigues, love affairs, hopes and disappointments.

Henry was part of the Reformation, a movement which was European rather than English, but England was caught in its whirl, and many things attributed to Henry are merely British manifestations of a widespread movement, and, as such, in many instances inevitable.

Let us consider briefly the condition of England during the lifetime of Henry VIII, embracing the latter part of the fifteenth and the first half of the sixteenth centuries:

Henry's rule began amidst perplexities, anxieties and embarrassments. The nobles were ambitious and divided into cliques. The people were poor, dispirited, unimportant and distracted by the claims of two hostile regilions. Scotland was convulsed with factions. Ireland was barbarous and in continuous rebellion. The people generally were rude and uneducated, the language undeveloped. Education was chiefly confined to nobles and priests. The poor were oppressed by feudal laws. No great work in English history, poetry or philosophy had yet appeared. The comforts and luxuries of life were scarcely enjoyed, even by the rich. The people slept on mats of straw, ate without forks off pewter or wooden platters. Tea and coffee were unknown and beer was the national drink. The houses, straw thatched, were dark, dingy, ill ventilated, uncomfortable and unsanitary. Commerce was small. Manufactures were in their infancy. Coin was debased and money was scarce. Trade was in the hands of monopolists. Coaches were almost unknown. The roads were impassable, except to horsemen, and were infested with bandits. Wheaten bread was a luxury. Agriculture was a mere scratching of the surface and implements were crude and primitive. Enterprise of all kinds was restricted within narrow limits. Beggars and vagrants were so numerous that the most stringent laws were required to protect the people against them. Profanity was universal. Capital punishments were frequent, public and revolting in character. The parochial clergy were ignorant and sensual. Sports were rude, cruel and dangerous. Fox hunting was the highest ambition of the county squires. Postal deliveries were costly and required days to reach the home counties. The population was about three million. Britain as a power was just being born. Such was Merrie England in the time of old King Hal: a rude nation of feudal nobles, rural squires and ignorant people, who toiled for a pittance on the lands of cold, unsympathetic, pleasure-seeking masters; without books, schools, privileges or rights, except the right to breathe the common air and indulge in coarse pleasures, religious holidays and village fêtes.

It was, however, an era of awakening. The times produced an amazing pageant of illustrious names. Columbus, with the fleet provided by Isabella of Spain, had just discovered America. Copernicus lived at this time, and his work of mapping the heavens and the perfection of the compass, marks the end of an old and the beginning of a new epoch. Leonardo da Vinci is painting his "Last Supper" and "Mona Lisa." Michael Angelo, immortal for his sculpture, painting, poetry and architecture, is living at this time, his contemporaries being Titian, Holbein, Botticelli and that brilliant scholar Erasmus, a frequent visitor and friend at Henry's court. Cortez has conquered Mexico and poured her gold into Spain, making that country rich and powerful and a menace to every other crowned head in Europe. Ambrose Paré is revolutionizing surgery in Paris. The great Linacre, physician to Henry VII and Henry VIII, Mary Tudor and Prince Arthur, is founding the Royal College of Physicians (1518). Machiavelli, historian, statesman and man of letters, is making his presence felt. Martin Luther is preaching his doctrine of Protestantism in Germany. Calvinism is spreading in France. Vesalius is shortly to publish his famous work, *"De Fabrica Humani Corporis."* He is the most commanding figure in European medicine between Galen and Harvey. The anatomy of the times was still the anatomy of Galen. *De Fabrica* exposed the teachings of Galen as representing the anatomy of animals rather than human beings and he was bitterly assailed. His old teacher Sylvius turned against him, but his work was carried on by his pupil Gabriele Fallopio. Vesalius, however, completely disposed of the Galenical tradition of a five-lobed liver, the double bile duct, the horned uterus, etc. Eustachius, a contemporary, bitterly opposed him. Vesalius died in obscurity. His work, however, stimulated Henry to permit four human dissections, the first ever allowed in England, and it was a medical feather in Henry's cap.

Such was the Europe of Henry VIII. To consider him, one must consider his times and the great forces with which he was surrounded.

One must also attempt to understand the thrones of Europe at that time. It is an age of dynasties, with each monarch a dynast. The great Maximilian, at the time of Henry's birth, is in Germany, head of the great Holy Roman Empire, neither holy, Roman, nor yet an Empire. Ferdinand and Isabella are in Spain, riding to power on a wave of Mexican gold, fighting their Moors and plotting for the conquest of Europe. Louis is struggling between these two to preserve France against them, and from the European invasion of the terrible Turk. Henry VII, founder of the Tudor dynasty, is sitting in a precarious position in England, ready to murder at the first sign of Pretendership. The Holy See in Rome is corrupt and usurious, divided in itself, yet all-powerful in Europe.

What of the children of these dynasts with whom we are chiefly interested and of whom Henry was one? These princely children were mere pawns in the great game of dynasties, mere rivets in the building of Empires; impersonal, pampered merely because of their usefulness in creating alliances which might be useful, or increase a country's power or prestige. The choice of a life mate was the will of the parents. Love or personal inclination had no place. Early betrothals, marriages of a shockingly juvenile character were propagated in the holy name of state expediency. Henry VII, Maximilian, Ferdinand and Louis are in their era to be likened to the beef, steel, coal and automobile barons of America in the late 80's, the founders of great empires, fortunes and powers.

*Read before Vancouver Medical Association, January 9, 1934. Reprinted from the Vancouver Medical Association Bulletin by kind permission of the Author and the Editor of the Bulletin.

Artillery is displacing Latin, the yeast of the printed word is spreading. Italy is the target, the spices and precious stones of India, the gold and fisheries of America, the prize. The children of such dynasties were, as I have said, regarded impersonally as mere pawns. Princes did not marry for love, they took wives only to beget children. Good health and breadth of hip were more important than accomplishments or beauty. Such children were taught, and absorbed from their mother's milk, the idea that this was their mission in life, and many of the crimes and brutalities attributed to Henry, were in reality an outgrowth of his incapacity to procreate a living, healthy male heir to the Tudor throne. Without an adequate understanding of the times, the European dangers which beset him, the all-importance of dynastic perpetuation, we cannot understand Henry, and with this brief review we return to Henry in the words of Maurice Thompson:

"There lived a Knight, when Knighthood was in flower,
Who charmed alike the tilt-yard and the bower."

Henry was born in 1491, the second son of Henry VII. His position was not important, as Prince Arthur, his elder brother, was heir presumptive to the Tudor throne. Henry was a healthy boy, a strong, overgrown, rosy fresh-faced boy such as we all know; but from the very first headstrong, dominant, self-willed yet ductile, highly petulant, fond of music and outstanding in athletic achievements of his day, the pride and joy of the Court, a splendid dancer and raconteur, he yet was not taken very seriously. His brother, Arthur, heir to the throne, was a weakling, obviously consumptive, and Henry in consequence was carefully groomed in the school of dynastic responsibilities to provide against the contingency of Arthur's death. Arthur was betrothed to Catherine of Aragon, daughter of Ferdinand and Isabella of Spain, the most feared monarchy in Europe. When he was barely fifteen and Catherine just fifteen, she set sail from Spain to marry Arthur. Henry, at this time, was only ten, and he it was who was dispatched, along with the escort of honour, to bring Catherine through England to London. Henry was very gallant and made quite an impression on the heavy, somewhat morose Catherine, and helped make her early days in England pleasant. Arthur and Catherine were duly married, uniting the thrones of England and Spain, but on account of their youth and Arthur's weak chest, it was decided at first that they should not live together. However, this was not carried out, as they spent their bridal night together and lived together in the Palace at Ludlow for five months, when Arthur died. Arthur has left only one sentence to posterity, but it has probably caused more trouble than any sentence ever uttered. We shall hear a great deal more of its effects later. The morning following the marriage ceremony, Arthur pushed his head through the draperies of the bridal bed and said, "Marriage is a thirsty pastime, last night I was in Spain." The statement is on record, and is Arthur's only recorded statement. Indirectly it led to the divorce of Catherine of Aragon, a quarter of a century later, the break of England from the authority of the Holy See in Rome, the establishment of England as a Protestant country and the establishment of the Church of England, with the usual roaring conflagration of anarchies, beheadings, cruelties, brutalities, intrigues and perfidies, incident to a holy war.

The death of Arthur was a national tragedy. The link with Spain was broken. Catherine's dowry was still but half paid and Henry VII stood to lose heavily. Young Henry was now heir presumptive and Henry VII, fearful lest some mishap should befall him, tried to marry almost every marriageable dynastic pawn in Europe in the hope of procreating a second son, a reserve, so to speak. But Henry was now old, crabbed, pock-marked, dissolute and impotent. Still this did not deter him. An interesting item from the standpoint of modern eugenics is that he tried to marry Mad Juana of Spain, insane or not, "since they have been assured that her derangement of mind would not prevent her bearing children." England's friendship was to be preserved, even at the cost of possible half-wit children. But death alters everything. Shortly afterwards, Isabella of Spain died and Catherine was no longer the prize she had been. No longer was she the daughter of a ruling dynast and the next few years were miserable for her. A veritable prisoner in England, no longer wanted, her dowry unpaid, in a foreign country, the story of Catherine's life at this time evokes our sympathy. Seriously ill with quartan malaria, her lot was not enviable. The one bright spot was the gallantry of young Prince Henry, who was always good to her. Gradually it became evident to Henry VII that he was not a matrimonial bargain. No one wanted to marry him. The only thing left was to betroth Henry and Catherine. But to a world intensely Catholic, there stood an obstacle which at first sight seemed unsurmountable, the Book of Leviticus: chapter 20, verse 21: "And if a man shall take his brother's wife, it is an unclean thing: He hath uncovered his brother's nakedness: They shall be childless."

Was Catherine a virgin? Had the weak, juvenile, consumptive Arthur been able to consummate the marriage? The statement of Arthur was on record. How to get around it! And here we find as fine an instance of medical cupidity as could be found in any modern court, involving a conflict of medical opinion. The bishops and the court physicians examined Catherine and flagrantly declared, with commendable insouciance, that she was "as intact as the day she left her mother's womb." Catherine, white-faced, true to her dynastic traditions, said nothing. One feels that if necessity had decreed otherwise, Catherine would have been declared a relaxed multipara. One cannot help but wonder whether the great Linacre, founder of the Royal College of Physicians and Court physician at that time, may have been a party to this duplicity. Henry was betrothed at the age of twelve to the eighteen-year-old Catherine of Aragon.

During the next few years, Henry grew up like a real modern boy. Profligate, headstrong, licentious, undoubtedly powerful, robust and a brilliant athlete, he was the envy of the tilt yard. At jousting, wrestling and riding he had no peer and the myth of his personality started growing: and he started trying to live up to it. Six feet four inches tall, tremendously powerful, mentally he was not neglected. He was well versed in Spanish, French and Latin, and thoroughly trained in statescraft. The old king, crafty, penurious and miserly, held England in a vice-like grip, exacting tribute drop by drop, beheading every possible aspirant to the throne and niggardly in the spending of money, ravaged by advanced tuberculosis, finally died in 1509.

Henry was now a boy of eighteen. His succession to the throne opened the flood gates of his father's treasury and he became immensely popular as the money began again to circulate. He and Catherine of Aragon were married and the next few years were given up to pageantry, pomp, tournaments and a war with France, because Henry felt he must show his kingship and power, although the war was entirely unprovoked.

In 1511 Catherine, after two previous miscarriages, gave birth to a male heir, which died in six weeks. When this was followed by one miscarriage after another, abortion followed abortion, Henry began to worry about the book of Leviticus: "They shall be childless." No greater curse could be visited upon a

dynast. Could this be a visitation from the Almighty, a punishment for the crime of incest in marrying his deceased brother's wife? Medical opinion in modern times would be inclined to take a different view concerning the ætiology of these repeated abortions and miscarriages.

Let us turn back the page a little. Henry was in France, busily engaged in a war of splendour, the "Battle of the Spurs," where he fell sick of a fever. When he returned to England, his illness is described as febrile, with pustules and eruptions over the body, from which, in a few weeks, he recovered. Later, an ulcer broke out on his leg, which remained a source of trouble all his life. It is described sometimes as a fistula which would close over and there would be great pain, and when the fistula opened the fever and pain would disappear. What are we to say of this suspicious illness? The abortions of Catherine, the cutaneous eruptions, the intractable ulcer with its mixed infection and underlying periostitis and probable sequestra, the subsequent illusions of grandeur, could only be syphilis. What do we know of syphilis at this time? By many it has been declared that syphilis was brought to Europe twenty-five years before by Columbus' crew on their return from America. Undoubtedly the disease was first called syphilis long after Henry's reign. It really gets its name from Syphilus in the Latin poem by the Italian physician and poet, Fracastoro, 1483-1553.

The question is: did syphilis exist prior to Columbus? Syphilologists record that Hoan Tai mentions it in Chinese writings of 2637 B.C. Japanese historians state that a disease which could only be syphilis is recorded by them thousands of years ago. The Hebrews were familiar with it, and many lepers were probably syphilitic. In 1250 A.D. a Dominican monk, Theodoric, wrote on the *Malum Mortuum* and recommended mercury inunctions for its cure. In Henry's time the disease was recognized under various names: Neapolitan disease, French evil, or Morbus Gallicus. The probable explanation of the tremendous wave of syphilis which spread over Europe during the time of King Henry and which was considered a new disease, is that Columbus brought back a new strain of spirochæte which acted much like the new strain of influenza virus about 1918, and that syphilis, like influenza, had existed for generations. Columbus in later years had obvious syphilis and died of it. In any event, Henry contracted syphilis and much of the subsequent brutality of his reign must be attributed to it. Just when or where he contracted the disease is not clear, but in later years when his condition was well known and the downfall of Wolsey was imminent, the rumour circulated that Cardinal Wolsey had given Henry syphilis by whispering in his ear. What he said is not recorded. Wolsey, however, had several healthy illegitimate children and there is no reason to believe that he ever had syphilis.

Henry's concupiscence continued to grow, his pleasures became more and more lewd. Lechery, nympholepsy and conquest became the order of the day. Poor Catherine did her best: abortion followed abortion, miscarriage followed miscarriage, premature birth followed premature birth. Her only living child, Mary Tudor, was an obvious congenital syphilitic. As she grew up her face was old, scarred, with patchy hair, areas of alopecia, square head, protruding forehead, frontal bosses, all evidences of inherited lues. She had extremely bad sight, undoubtedly due to interstitial keratitis. Her subsequent marriage to Phillip of Spain, her own abortions, her early death of cerebral thrombosis at the age of forty-two, make too plain a picture to be denied. Poor Catherine: As Kemble says, "she had been practically the whole of her child bearing life in that condition in which every wife should be who loves her lord."

About this time Henry began to develop illusions, surrounded as he was by obsequious courtiers whose life was devoted to flattery, whose sole object was to aggrandize Henry in his own sight. The court favour-seekers, like village curs, barked, not for reason but because their fellows do. Consider even the great Erasmus in a communication to Henry: "Who is more dexterous in war than Henry VIII? (Henry had never shown any particular military aptitude.) O Bosom truly Royal, O worthy mind, worthy of a Christian Monarch, although no King is better furnished with the means of war (Henry was broke), yet you apply all your study, all your powers, to make peace of the world." Little wonder that Henry developed ideas of grandeur. He developed an overweening vanity and ideas of grandeur beyond belief. In speaking to the French Ambassador, he says of Francis, with regard to the possibility of Francis invading Italy, "His dread of me, lest I should invade his kingdom, will prevent his crossing the Alps. My belief is that if I choose, he will not cross the Alps, and if I choose, he will cross." Hardly had these words been uttered than word was brought (and in those days information travelled slowly) that Francis had already crossed the Alps and had conquered Milan. Henry was chagrined and humiliated. Francis completed the famous concordat with the Pope, allying the Holy See and France, a plan which was soon to wreck Henry's bill of divorcement from Catherine, as the Pope, now safely allied to France, no longer feared Henry.

To digress slightly, about this time insanity was rife in England and a strange new madness is recorded: "these slovenly menials who think they be kings"—surely as succinct a description of G.P.I. as one could obtain, incorporating moral and physical degeneracy as it does with ideas of grandeur. To control the rising tide of insanity the Monastery of St. Mary's of Bethlehem in London was converted into the first hospital for the insane. The term Bethlehem degenerated into Bedlam, from which our modern word is derived. All too soon Bedlam was living up to its name.

Henry was now determined to rid himself of Catherine and instituted divorce proceedings, which, however, could only be sanctioned by the Pope. Henry's claim was that Catherine's failure to produce an heir was a visitation and punishment on the incestuous nature of his marriage, and he petitioned to have the marriage annulled, piously quoting the 20th chapter of Leviticus. He claimed the incestuous marriage had crept too near his conscience. The fact of the matter was that his conscience had crept too near another lady, one Anne Boleyn. Henry depended on Wolsey to get him this divorce and Wolsey's power was ubiquitous. No man's pie was free from his ambitious fingers. For six years the struggle with Rome continued, the Pope vacillating and Anne Boleyn shrewdly refusing to yield to Henry's amorous overtures. The desire to possess Anne became an obsession with Henry and he moved heaven and earth to sway the Pope. Anne Boleyn's refusal to accede to Henry's sensuous advances is an interesting psychological study and probably won her the throne. Many a modern girl has won a home through chastity with the victim of her intentions, and limitless profligacy elsewhere. Man desires, as a rule, what is difficult to attain.

To digress again: Henry's physical prowess was undiminished, his strength was proverbial. No man could stand against him in the lists. But his moral courage was not quite so evident. About this time a severe epidemic of sweating sickness broke out in London. The disease was rapidly fatal in twenty-four hours and Henry was mortally afraid. Plague was also prevalent, though we are still over one hundred years ahead of the Great Plague. But with Henry's

friends dying all around of sweating sickness, our hero quickly packed up and fled to the country, discreetly leaving Catherine in London. Sweating sickness is a disease of filth, apparently still present, or at least still described in Osler, and is indicative of the sanitary conditions of the times. Henry's leg began to cause increasing trouble. Sir Thomas Butts was in despair. Butts was Royal Physician at the time, the only physician mentioned in Shakespeare, and the first to be knighted for medical services, for, although Linacre had been knighted, it was as a philosopher and scholar. Butts is the first medical knight. Henry became intensely interested in ointments, liniments and potions, and with the court apothecary, Culpepper, whom he was later to behead, concocted many ointments which read like an old Chinese pharmacology: ground tigers' teeth to give strength, ground pearls, costly spices, incense, etc., to drive out the moist humours which had got into Henry's leg. Not content with trying these on his own leg, Henry practised upon all and sundry whom he could persuade to try his ointments, and "The King's Own Plaster" was for sale throughout the land.

The weary struggle for divorce continued for six years. Henry was furious to think that anyone, be he Pope or Sovereign, would not yield to him. About this time, evidence of Wolsey's duplicity reached Henry. Wolsey had been trying to get for Henry the Pope's sanction to the divorce, but a letter, revealed to Henry, showed he had actually advised the Pope against it. This marked the downfall of Wolsey, the break with Rome, the establishment of Henry as head of the Church in England, the rise of Thomas Cromwell and the appointment of Cranmer as the Archbishop of Canterbury. Anne Boleyn, seeing victory assured, yielded to Henry's amorous overtures and Catherine of Aragon was divorced and the marriage officially annulled on the basis of its incestuous character. It is strange that after living with Catherine twenty-four years the incestuous nature of their union should seriously start to worry Henry about the time that Catherine ceased to menstruate. But Henry had failed in his mission as a dynast. There was no heir. Catherine too had failed, though through no lack of industry and no fault of her own, and she knew she had failed. The date of Henry's marriage to Anne Boleyn is not clear. It is recorded in March, but by some chroniclers it is set back as far as November, probably in deference to Anne's already protuberant abdomen.

At this time Luther was rising in Germany. The Reformation was under way. Cromwell and Cranmer in England were disciples of the post papal Catholic Church in England. Anne Boleyn was directly responsible for the break with Rome. Prince Arthur's naive remark twenty-five years before, indirectly the excuse for the break. England was still Catholic, but no longer Roman. Once Henry's unrequited love had been sated, he ceased for a time to concern himself much with religion. The work of the Reformation was quietly pushed forward by Cromwell and Cranmer. Wolsey died in Leicester Cathedral on his way to London and his death unquestionably saved him from being beheaded.

There is a point in Henry's mental make-up which was here revealed, which shows, to some extent, his peculiar psychology. He had broken with Rome in order to marry Anne: the only way he found he could possess her (and this was the first amorous reversal of his life), using as an excuse the incestuous nature of his marriage to Catherine, and undoubtedly in mortal terror of the curse of Leviticus, "they shall be childless," yet the next day he married Anne Boleyn, whose mother, Lady Boleyn, and whose sister Mary, had in earlier days been his concubines. There is even some suggestion that Anne was his own daughter. So Henry purified his soul by divorcing Catherine and plunging from a legally incestuous marriage into one which, if not legally so, in the eyes of God and the book of Leviticus, was even more incestuous than his previous one. But Henry artlessly failed to see this. Mary, his own daughter by Catherine, naturally was illegitimatized by the annulment of Catherine's marriage, and she was subsequently treated very harshly and bitterly, being deprived of her father's presence, and grew up morose, saddened and bigoted, devotedly Roman Catholic, a fact which was to lead to bitter revolution in her subsequent attempt, as Bloody Mary, to overthrow the early fruits of the Reformation in England.

On September seventh, Anne was delivered. In spite of the assurances of soothsayers, sorcerers, astrologers and physicians, the child was a girl. She was named Elizabeth and destined to lead England to power and heights never before reached and to lay the foundations of our own mighty Empire. Was Elizabeth the daughter of Henry? Had Anne, in her shrewd refusal to be Henry's mistress for so long, preserved her integrity against other lovers? Was she likely, with victory so close at hand, to jeopardize her chances by cavorting with someone else? Dean Inge believes she was not Henry's child. She, at least, was healthy, not syphilitic like her sister Mary and as all Henry's children had proved to be. In the light of Anne's subsequent nomadic cupidity, I cannot but believe that she, ambitious to secure her position, and believing as she did that all was not well with Henry, deliberately yielded herself to one of the multitude of willing courtiers and that Elizabeth was not Henry's child at all. However, conceived as she was out of wedlock, she was born beneath its holy benediction. But, Anne was soon to begin showing the same unhappy faculty of aborting as had characterized her predecessor, and she became somewhat of a nymphomaniac, or is reputed to have so become. She is even reputed, during her puerperal state following the birth of Elizabeth, to have seduced one of the court nobles, and she was accused of incestuous relationship with her own brother. The net was tightening around Anne Boleyn, and unwittingly drawing it tighter was a young girl of seventeen, Jane Seymour by name, with whom Henry had been dallying for some time. Anne knew this, but she had to close her eyes to the chagrin and humiliation of Henry's contemptuous infidelity. And so Anne was accused. The shoe, however, fitted only one foot, while Anne's cupidity was to cost her her head; with the shoe on the other foot, Henry was free to inhale the fragrance of such extra-uxorial pastures as his amorous browsings led him to frequent.

Anne was summarily tried in a Court packed against her, headed by the Duke of Suffolk, her own uncle. The evidence had been prepared by bribery, the rack and the fear of Henry's vengeance. She had no chance. With a single flash of steel, her beautiful head was divorced from her body and her life from Henry's. Her brother was similarly executed, although the only thing proved against him was that he had kissed Anne during her puerperal convalescence. If there is one really brutal blot on Henry's character, it is the murder of Anne Boleyn. Her infidelity has never been substantiated by historians.

Next day Henry married Jane Seymour, a blood relation and another incestuous marriage. Henry was now forty-six, Jane Seymour, eighteen. Within sixteen months Jane was delivered of a sickly, male heir to the throne of the Tudors and Henry was happy. Within two weeks Jane died of puerperal septicæmia. Childbed fever remained a smudge on the tapestry of medical history right down to the advent of Lister.

But now a great change comes over Henry. No longer is he the swash-buckling cavalier. He is visibly

slowing up. From a medical standpoint this period of his life is most interesting. His leg began to give increasing trouble. He became very sedentary, ate voraciously, took little exercise and his weight increased enormously. The closure of his fistula led to innumerable fevers, relieved by the opening of the fistula in the old ulcer. Mentally he became much more retarded, fading more and more into the background, afflicted with the most furious rages. He began to have the most violent headaches, lasting days at a time, throbbing in nature, affected by exertion and undoubtedly due to a rising blood pressure. Ideas of his own grandeur began to obsess him. He was not a king, but King of Kings. Affairs of state gradually passed into the hands of Cromwell and Cranmer, who, both of anti-papal natures, furthered the separation from Rome and widened the breach. Catherine of Aragon died, heavy, pale and dropsical, of cardiac failure and cirrhosis of the liver, whether of specific or malarial origin, or both, is unknown. Her daughter Mary was thrown back on Henry's hands. He forced her to repudiate, by word of mouth, her allegiance to the Pope. This she did, after special Papal dispensation permitting her to do so for the sake of peace, though she meant no word of it. Henry during this time appears to have lost all appetite for the beautiful ladies of the court, excusing his developing impotence and past concupiscence by stating that it was only a son he wanted and that he was not really nympholeptic. It appears that at this stage he was really trying to be good, but he was neither an Adonis nor an Origen[1].

Henry's abdomen became enormous, a developing cirrhoisi became painfully evident, and the story of his armours would probably have ended here had it not been for two things. Cromwell was ambitious, and several rumours reached Henry concerning the gossip in the court, that Henry was no longer potent, that his rivers of virility had run dry. What! Henry burned out? Henry no longer able to procreate? He would show them. Henry's colt's tooth had evidently not yet been wholly cast. Cromwell suggested several possible dynastic marriages, finally recommending Anne of Cleves, sister of the young Duke of Cleves, who had integrated several of the border states of Savoy, Flanders, Luxemburg, Burgundy and Lorraine. Cromwell thought such an alliance might give him a wedge against France and Germany, but Henry was suspicious and sent Holbein to Flanders to paint her portrait that he might see what he was getting. Eventually and quite apathetically he agreed on the marriage with Anne of Cleves. Holbein had done his work well.

When Anne of Cleves arrived, Henry went to meet her. She had apparently been grossly misrepresented to Henry. She was dull, ugly, bovine, heavy and unattractive. It is said that the marriage prospect had been so distasteful to her that she had with deliberation made herself as ugly and awkward as possible. Henry rushed out, blind with rage and fury, heaping blame, censure and vituperation upon everyone, shouting "Cromwell has brought me a Flanders mare." Holbein managed in some way to save his head, but Cromwell was, within a year, to be beheaded. Strangely enough, just one hundred and one years later, a descendant of this very Cromwell was to roll the head of an English Sovereign in the dust. Whether or not Anne was as ugly and bovine as she has been depicted is not clear; certain it is that she was by no means Junoesque. Henry did, however, marry her, but the marriage was never consummated. In consequence, of all Henry's wives, Anne of Cleves is the only one whom I should have expected to have given a negative Wasserman. But there were other reasons why Henry was displeased with Anne. The earlier jokes and twittings of Henry on the subject of his waning virility had again whetted his appetite and he refused to allow the sap of reason to quench the fire of his passions, and had already, before Anne arrived in England, started a furious love affair with a young nineteen-year-old girl of the court, one Katherine Howard, and Henry once again allowed himself to be flayed by the whip of instinct. His treatment of Anne of Cleves was extremely generous, her settlement princely and her divorce prompt. Rather hard on English taxpayers, but very satisfactory to Henry.

[1] Who mutilated himself.

But what of Katherine Howard? Young, pretty and flighty, she had caught Henry's fancy. A confirmed nymphomaniac from the age of twelve, one cannot help but feel that Henry was spurred into this marriage by the jests of the courtiers. The wedding was duly solemnized, but Henry was either wilfully blind or extremely doddering not to have known what Katherine was. Her cupidity was already famed, yet Henry, rapidly slowing up, seemed to be very happy with her. His life became more and more sedentary, his belly more and more ponderous, his legs more and more troublesome. Goaded and twitted again by the courtiers with his developing impotency and physical incapacity, he embarked on an entirely unnecessary war with France. The sails of his ship were of cloth of gold, the personal aggrandizement of our hero was lavish. Everything glittered with gold to exhibit the personal glory which was Henry's; yet when the French fleet hove into view, he fled his ship and sped to London, discreetly excusing himself by quoting freely from the Book of Deuteronomy. Calais was captured at the cost of an impoverished England. Henry now rested on his laurels, leading the most sedentary life; over-eating, over-drinking, over-indulgence were steering him for the break which was soon to come. Katherine's cupidity was boundless and shameless, and she seemed to feel that if her amours were not actually perpetrated in public, concealment was unnecessary.

Katherine was never pregnant, probably due to gonorrhœa at the age of thirteen. She finally became entangled with one Thomas Culpepper, with whom she fell in love and succeeded in seducing. The news was conveyed to Henry. This marks the complete breakdown of old King Hal. He broke down and wept like any child. I do not think that he minded so much the lechery of Katherine, but her excuse that he was old and impotent and unable to satisfy her was gall and wormwood. He, Henry, King of Kings, Emperor, Defender of the Faith, to be so humiliated. From this humiliation he never recovered. But he was still master of the situation. There was still the Book of Ezekiel to fall back upon: 23rd chapter, verses 22, 37 and 48: "Thus O Oholibah, thus saith the Lord God. Behold I will raise up thy lovers against thee from whom thy mind is alienated and I will bring them against thee on every side. And the company shall stone thee with stones and dispatch thee with swords, thus will I cause lewdness to cease out of the land, that all women may be taught not to do after your lewdness." Remarkable words to be quoted by the Prince of lovers. Henry was as good as his word. Every courtier who had been even remotely associated with Katherine was empanelled against her. Even her boyhood lovers, one of whom confessed to spending a hundred nights with her during her salad days. And so the sword fell, and in reviewing the history of Katherine, I can only say that in my humble opinion "it served her damn well right, sir." Culpepper, with whom Henry had concocted so many weird unguenta, lotions and potions, suffered a similar fate.

Henry was now, however, a broken man. He was fifty-one and had swollen to a prodigious size. It has been said that a good wife subserves three functions:

She is the young man's mistress, the middle-aged man's companion and the old man's nurse. Henry had somewhat reversed the order. Boleyn, Seymour and Howard had been his mistresses, Catherine of Aragon both mistress and companion, and his nurse was yet to come.

A year or so following the execution of Katherine Howard, Henry was to get his nurse, and truly he now needed one. Katherine Parr, already twice widowed, found favour in his now lustreless eyes. Freed from past encumbrances, the Book of Leviticus no longer worried him, though he had broken from Rome and proclaimed himself the head of the Church in England. His church was still Catholic and he lived and died Catholic, though no longer Roman. But as the head of the Church and its High Priest, the Book of Leviticus had prescribed certain rigidities in the matter of marriage: "and he shall take a wife in her virginity. A widow, a divorced woman, a profane or a harlot, these shall he not take, but he shall take a virgin of his own people to wife"—Leviticus 21, verses 13 and 14. Leviticus was again a matter of expediency rather than faith. Katherine Parr, able to view in retrospect the long corridor of Henry's past marriages, marked already by five mile-stones, two of them red with the blood of murder, two black with the taint of divorce, one stained with puerperal fever, and the whole liberally dotted with the intervening yardsticks of amours, concubinage, mistresses and wantons (for Henry had been very catholic in his loving), ladies of the court, tavern wenches, gutter doxies and the merest trulls had all been her predecessors. She herself, gentle, learned, dutiful and infinitely tender, nursed him to the end. What of the end?

It is a long vigil of Katherine's, punctuated by hours of hot fomentations to his leg. The other leg broke out. Repeated cauterizations, until his chamber became so foul that visitors were excluded. His weight was now some 39 stone, over 400 pounds. His abdomen, huge, dropsical, swollen and distended. He presents a picture of advanced hepatic cirrhosis. He was no longer able to eat. In his early days a gourmand, he could eat (like an Og) but in the words of one authority, "today a pot of Rhenish and a pair of pickled herrings set him to belching like a fishwife full of beans." Furthermore, he became subject to colic following his food, and it is possible that the Royal cholesterin had crystallized and precipitated. A modern cholecystogram might have made diagnosis easy. His colour became that of putty. His skin cracked with œdema and his tongue became too large for his mouth. Moving him about became actually a matter of block and tackle. His mind, so brilliant in its youth, so unstable in middle life, never really failed him. Some of his last orders were extremely cruel, the order executing the old soldier Norfolk had to be signed with a rubber stamp as he could no longer raise his œdematous arms. Yet his mind was clear. He is said to have died of uræmia. But a swollen body and an undulled intellect spells cardiac rather than a renal death and I should have expected his urobilinogen to have been more proportionally increased than his non protein nitrogen. And so Henry died. His body burst open after death, so it is said.

To the average school girl, King Henry VIII is the man who had a dozen wives and murdered them all. To the average woman Henry is a loathesome "mountain of dripping," whose life was devoted to adultery and lechery, to whom marriage was a matter of pleasure and voluptuousness and whose life was characterized by the most inordinate brutalities, murders and intrigues, so that the executioner's block stood ready to receive innocent and guilty alike, guilty of anything from murder to the simple sins of apostasy. To the devout Roman Catholic, Henry is unquestionably the devil and the fiend incarnate; but could the immortal Da Vinci, Holbein or Titian have faithfully portrayed that fiend or devil in Henry, could they with greater accuracy have depicted it in any better way than in the serpiginous form of the Spirochæta pallida? To the devout Protestant, Henry is the man brave and strong enough to free England from the thraldom and usury of the Pope, the founder of the Church of England, defender of the Faith, his atrocities leavened on the altar of necessity, his brutalities overlooked in his zeal to purge England of papal power and authority.

Amongst this mass of popular opinion, what do we, a group of medical men, sitting here tonight as a court, think of the life of Henry? How would we adjudicate? What verdict would we bring in?

We remember Henry's boyhood, whole hearted and vigorous, one of a fairly large family on both sides, his ancestry clean of any hereditary taint. His early manhood a veritable giant: six feet four inches tall; the terror of the tilt yard, an athlete of power and renown, the idol of the young women of the court, all eager and willing to pay any price for the Royal favour. Syphilis is sweeping Europe like a veritable plague and the youthful Prince contracted it. One cannot doubt the nature of his illness. The slight fever, the eruption on his back, the subsequent ulcer on his leg, which frequently drove him and his physician, Sir Thomas Butts, to distraction. This ulcer was frequently referred to as a fistula. There can be little doubt that it was a large ulcer, overlying a luetic periostitis or osteomyelitis. When the sinus was draining all was well; when it closed, a fever, pain and distraction, until the sinus broke open and relief was obtained. Certainly it does not sound like the only other common cause of leg ulcers: varicose veins, the ulcers from which are usually singularly painless and not given to sinuses which close and reopen with a flood of pus. His middle life, in the forties, was characterized by the most amazing ideas of grandeur. This little monarch, king of a domain of less than four million souls, believed himself to be the greatest monarch in Christendom. The Emperor Charles V, the greatest living monarch, was a child compared to Henry. Francis, Julius and all others were pigmies compared to our hero. His early degeneration, the tremendous dropsical abdomen, secondary to a cirrhotic liver, associated with biliary calculi, may undoubtedly have been a luetic cirrhosis. The cracked lips, the fissured tongue, the tallow-like flesh, the bilious vomiting, the distressing flatulence, the pillar-like œdema of his legs, the foul odour from his ulcer, all make a picture easy to visualize. I do not assert that Henry was a definite G.P.I. I believe he died a cardiac death before the later manifestations of paresis, in the form of complete mental breakdown, had time to become manifest, for Henry's mind never failed him. Personal slovenliness was undoubtedly present. His beard, in later life, was stained with the remnants of food, wine and saliva. His doublet was continually similarly soiled. His early death, in his early fifties, was not uncharacteristic of his times, although Norfolk reached 80, Warham and Fisher 70, Pope Julius 80 and Michael Angelo 90.

Was Henry, as reputed, inordinately cruel to his wives? Consider: he was born a dynast. His father had taken the English throne by force. The succession was still uncertain. He had been taught from earliest childhood that the supreme mission of a dynast is to procreate, to beget a son which should be his heir, to beget daughters which could be used as pawns in the great game of dynasties, then at its height. He lived with Catherine of Aragon twenty-four years; it was an incestuous marriage, marked by abortion, miscarriages, premature deliveries and infantile deaths. This went on for years and Henry

more and more began to feel that this was a visitation from the Almighty, a punishment for the crime of incest. Modern pathologists would take a different view of these repeated miscarriages and abortions. The mission of the dynast was still unfulfilled. There was no male heir, and when Catherine, at the age of 42, ceased to menstruate, was sick and sombre and poor company, Henry divorced himself from her morose and now sapless bosom, spurred, as a modern Freudian might state, by a "dynastic urge." There was no personal cruelty to Catherine. She was subsequently well taken care of. But love enters not into the marriage of kings. She was a brood mare who would not breed and so no use to a dynast. Anne Boleyn, taken in a wave of passionate ecstacy, soon began to abort as had Catherine. She bore Elizabeth, probably the daughter of Norris. In her desire to produce a son, she tried too many lovers, and although her cupidity was never wholly proven, the disgrace was too much to be borne, the people called her "the concubine" and "Anne Bullen—the whore," and the first woman to be created a peer of the realm, became the first woman to be publicly executed in England. Jane Seymour, herself but a child, died of puerperal septicæmia, following the birth of the long sought son and heir. Anne of Cleves, whose marriage was never consummated, was richly endowed with Royal favours as a reward for not opposing Henry's desire for divorce. Katherine Howard, a wanton, a nymphomaniac, whose licence and lewdity knew no horizons, was beheaded, and many a modern woman has been shot for less. Katherine Parr survived him.

All this for the sake of living, healthy sons. What of his children? The Duke of Richmond, illegitimate offspring of Bessie Blount, a pale, pasty, anæmic child, died in early youth. Mary, scarred with the taint of congenital syphilis, reared in an atmposhere morose and depressing to the extreme, taught from her childhood to abhor and detest the whole idea of the Reformation, her soul dwarfed with suppressed hate and bigotry, her subsequent reign as "Bloody Mary" might have been foreseen. Edward, Prince of Wales, son of Jane Seymour, sickly and a weakling, died in the early years of his regency. Elizabeth, daughter of Anne Boleyn, probably not his child, not syphilitic, was destined to lead England to a glory hitherto unapproached. Henry undoubtedly weaved into the long rope of British history the scarlet thread of syphilis.

To a modern psychiatrist Henry presents a beautiful example of the Oedipus complex so fully elaborated by Freud. Oedipus is a character in the Greek epic Oedipodea, and he is shown as the son of Louis, King of Thebes, and of Jocasta, his queen. Separated from his family in early life, the young boy was ignorant of his own parenthood, and later, returning to Thebes, slew his father and married his mother, from which union four children were born. The sexual attraction of blood relative for blood relative has been woven by Freud into a famous complex, well known to psychiatrists as the Oedipus complex. Henry certainly must have satisfied his Oedipus complex because he seems to have been attracted all through his life by women of close blood relationship; most of his marriages were incestuous, and if ever an Oedipus complex in a man received full gratification, surely the case of Henry VIII was one. By some, to this close inbreeding has been attributed the pitiful condition of Henry's children, particularly Prince Edward, son of Jane Seymour, an incestuous union. Today incest is both a crime and a sin, violating as it does both the laws of the country and Holy Writ. History teems with the brilliant names of men and women, the offspring of such close blood relations as brother and sister. It is a common belief that such unions result in half-wit children. Is this actually a fact substantiated by medical evidence? Does the breeding of a man differ from the inbreeding of animals? Kemble believes that it is not. "The effect of inbreeding with cattle has been truthfully evaluated for a long time past. Many studs consist of animals of the one family stock. It is then well known that if any particular trait is common to both parents it will be reproduced in an intensified degree in the offspring. This rule holds for both good and bad traits alike. Animals' undesirable features, of coat, proportion, temper or flesh, are eliminated from the herd, and by careful selection and judicious mating of those with desirable points it is possible to "breed away from" the objectionable characteristics and to approach closer and closer to the ideal. Affinity of blood, *per se*, does not produce any degenerative features, but on the other hand, providing the initial stock is good, it can only be an influence for betterment in breeding since it implies that many good attributes are common to all parents." (Kemble.)

Have we any parallel in human life to the inbreeding of a herd of cattle which might refute the suggestion that the condition of Henry's children was due to incest. Let us consider the family tree of the Ptolemies of Egypt. The first Ptolemy was the son of Lagos, a Macedonian general under Alexander the Great. His mother, a relative of the King of Macedonia, both of good, sound, healthy stock. For three centuries, including thirteen life cycles, the Ptolemies all married their own sisters or other very close blood relation. Cleopatra was the fourteenth generation of successive brother and sister marriages. Her father and mother were brother and sister, yet history has produced few more brilliant intellects among women than Cleopatra. Her physical beauty is traditional. There is no physical or mental breakdown here after fourteen generations. What of her morals? Judged by present standards, she had a convenient lack of morals, but she was not considered immoral in her time? She was a typical product of her environment and this promiscuity was perpetuated right down to our own Victorian era. In Henry's time mistresses were quite the thing. A man's legitimate and illegitimate children were frequently raised together and with equal privileges. In much later times mistresses were openly acknowledged and respected, as in France with Madame Du Barry and Madame du Pompadour; so that we cannot say that Cleopatra was a moral degenerate viewed in the light of her times, any more than one can claim King Hal to have been a moral degenerate viewed in the light of his times. If we accept this startling geneological tree of the Ptolemies, we can scarcely attribute the difficulties of Henry's offspring to incest.

How small a thing it takes to change the course of human destiny! From the great wealth of material, just a few striking examples: Louis XVI had a phimosis and was unable to consummate his marriage with Marie Antoinette. Fear of the simple surgical operation of circumcision paved the way for the French Revolution. Louis delayed his operation for seven years and Marie took her pleasures where she found them. Tales of her flightiness spread through France, fostered by Louis' brothers, who hoped to inherit his throne. His circumcision, followed by heirs to the throne, came too late. Lord Byron, born with the spirit of a soldier, fired with the ambition to deliver Greece, was born with a talipes equino-varus which ruined his physical career and he, shunning the society of men, became a lady's man, which resulted in the production of some of the Empire's finest poetry. The infinitely minute tubercle bacillus saddened the soul and tinctured the music of Chopin. A contracted pelvis prevented Queen Anne from giving birth to a living child, or to children which, if alive, were so maimed by cerebral birth trauma that none survived

childhood. If a simple Cæsarean section had given Anne one living child, the present House of Hanover would probably not be ruling in the Empire today. There would have been no Queen Victoria the Good, or Edward the Peacemaker, and King Henry's Tudors would still be ruling England. An uncharted ditch cost Napoleon the Battle of Waterloo, changing the course of history. The importance of the infinitely little, in Henry's case the spirochæte, made the British Empire a Protestant nation.

The story of his brutality I believe to be largely a myth. In later life his brilliant intellect was dulled by a toxin which was neither understood nor recognized. The supreme tragedy of his life is the advent into the regal veins, at an early age, of the treponema pallidum which, disporting therein, wrought changes for which Henry cannot be held responsible. His multiple marriages were the result of his desire for a son, a desire the fulfilment of which was nullified by the same spirochæte. There was a rough justice about old King Hal's doings, an early British sense of fairness which fails to characterize the actions of contemporary monarchs. Henry's life and actions seem very kind, humane and almost saint-like compared with the earlier Cæsars, the Empress Theodare, the temporal Popes, Cæsare and Lucrezia Borgia, the Romanoffs, Gengis Khan, Katherine, Peter, Frederick the Great or Ivan the Terrible.

What verdict shall we bring in? Guilty of infamous cruelty, or not guilty? In the early days of Victoria, a man rushed out of the crowd and fired a shot at the Queen's person. At the subsequent trial, it being proven that he was hopelessly insane, a verdict of not guilty was brought in. Victoria was furious. Not guilty? Why, I saw it myself! To placate the Queen, British jurists altered the verdict to meet this and subsequent occasions to "Guilty but insane." Shall this be our verdict? Shall we say "Guilty, but irresponsible, due to the ravages of untreated lues"? Such is my verdict! "Much as we hate to have our earlier ideas and beliefs disrupted and to relinquish traditional examples of wickedness, when Reason is the Iconoclast and Medical Fact his mighty weapon, the gods all crumble in the musty temples of traditional prudery, we shall turn to worship at the altar of enlightened truth." (Kemble.) May God rest his jaded soul.

The Editor of the BULLETIN of the Vancouver Medical Association appended the following note:— "Dr. Lyon Appleby read the paper on *The Medical Life of Henry the Eighth* before the Vancouver Medical Association on January 6th, 1934. Probably nobody got more out of the paper than Dr. Appleby himself, whose reading in search of material for his presentation must have carried him into many delightful fields. One of the most enjoyable parts of the evening's programme was the contribution by Dr. Wallace Wilson, who, in a delightful speech, challenged most of Dr. Appleby's conclusions as regards the syphilitic theory as used to account for the vagaries of Henry the Eighth. While not disputing many of the facts adduced by Dr. Appleby in support of his theory, he questioned the interpretation put on these facts, and backed his contentions by numerous quotations and references which displayed a remarkably catholic knowledge of the history of Tudor times. Dr. Appleby admitted that the case might well be interpreted the one way as the other, but pointed out that his idea had been to provoke discussion.

One further note might be added. It has been stated that the verdict "guilty but insane" was in common use before the reign of Queen Victoria, though the incident recorded here no doubt occurred.

—Editor, Manitoba Medical Association Review.

VICTORIAN ORDER OF NURSES

Thirty-two years have passed since the Winnipeg Branch of the Victorian Order of Nurses was organized.

During 1933, in this City, 1635 cases were nursed and 16,282 visits made. These visits represent nursing care to Medical, Surgical and certain types of Communicable diseases; also Health Instruction; and a complete Maternity Service to patients in their own homes.

We attended 152 Confinements and assisted at 33 Operations in the home. Fees amounted to $4,742.26. Detailed statistical report is on the table and may be seen by any person interested, at the close of this meeting.

The usual demonstrations were given to the graduating classes of the Winnipeg General and Misericordia Hospitals.

A NEW FOOD

It is interesting to note that a new company has been started in St. Boniface, manufacturing a breakfast cereal called Great West Breakfast Food. The representative of the Manitoba Medical Association Review had been interested in the radio talks this company was broadcasting every day, and hence made a visit to the cereal company, where he was very cordially received. The Great West Health Food Company are the manufacturers of Great West Breakfast Food, and we were much impressed with the conversation we had with the executive of the health food company. We found that the product is made out of the best Reward wheat, to which nothing is added or taken away, except that certain changes take place in the process of manufacture which eliminates practically all the starch, and now places before the public a breakfast food practically without any starch.

Thus the company claims that its product is exceptionally good for those people whose medical practitioners have advised them to abstain as much as possible from starchy foods.

Your representative may lay claim to the fact that he brought to the attention of the company that it has an extremely good bi-product, a practically starchless flour. Certain investigations will be made by the company in connection with this bi-product in the next few weeks, when we may have something further to report on this matter.

An analysis for proteins, fats and carbohydrates recently taken by B. Guy Hunt & Co., analytical chemists, as follows:—

Protein - - - -	16.09%
Fat - - - - -	1.95%
Carbohydrates - -	73.44%

The company states that the aperient qualities of Great West Breakfast Food are remarkable, particularly because of the fact that no other seed is added to the product and claim that it has developed a breakfast food out of pure wheat without adding anything to it. The product is made under very high temperatures and is practically a stop-watch proposition.

The company would welcome any medical men to try this product and will co-operate with them to the fullest extent.

Medical Services for Citizens in Receipt of Government Relief Funds

PLAN ARRANGED WITH CITY OF WINNIPEG

At a general meeting of the medical profession on January 26th it was decided to notify the municipal councils of Greater Winnipeg that, after February 15th, the profession would be unable to provide free medical care to citizens in receipt of relief funds, except in the case of an emergency involving immediate risk to life. A resolution to this effect was passed unanimously, and all those present signed an agreement to conform to this decision. Notification of the decision of the meeting was sent to the municipalities concerned.

As noted in the daily press, a plan for providing medical care for citizens on relief, was submitted to the doctors by the Relief Committee of the Winnipeg City Council on January 31st and accepted.

Finally on Tuesday, February 13th, a meeting of the City Council agreed to adopt this plan for a period of three months. On February 14th the City Council suggested to the representatives of the medical profession that more time would be required to complete the printing of forms and other necessary details. The Special Relief Committee of the Manitoba Medical Association and the Winnipeg Medical Society agreed that a week should be allowed for this work and agreed that the decision to discontinue free services for relief cases should be deferred for a further week.

The plan which is being adopted will result in a system of medical services comparable in many respects to that provided under the Workmen's Compensation Act. Patients will have free choice of doctor in the home and in the hospitals. It is presumed that hospital cases will be placed in public wards, but will be under the care of the doctor of their choice. In some hospitals the system of admission will classify these cases as "public" and in others probably as "semi-public"—they will not, in any case, be admitted under the honorary attending staff of the hospital.

Under the plan as adopted, all doctors in Winnipeg were invited to put their names in the "panel" for the care of relief cases. In order to give every patient free choice of doctors it is expected that all men in active practise will submit their names. The names can be submitted under any of three classifications.

The other municipalities in Greater Winnipeg have not arranged any plan for medical services for citizens in receipt of relief funds and the decision of the profession to discontinue free services to these cases, except in emergencies involving immediate risk to life, went into effect on February 15th. The committee is prepared to carry on negotiations with these municipal councils and also is preparing to take the question up with the rural municipalities.

The details of the plan referred to and the classification of doctors in the "panel" follow:—

SUGGESTED PLAN

"A"

1. A list of physicians who wish to participate in the Winnipeg medical relief scheme shall be prepared.

2. A copy of this list with addresses shall be kept available at the relief offices (Elgin Avenue and Women's Department).

3. Physicians registering as above set out shall sign an agreement to abide by the rules and regulations covering medical relief, the terms of which agreement shall first be agreed upon by the Winnipeg Medical Society and the Unemployment Relief Committee.

4. Notices shall also be posted advising persons on relief who require medical attention (including maternity cases) to arrange for same through the Relief Medical Officer, and to advise name of family physician (who is on the posted list) and Relief Medical Officer shall issue the necessary authority for medical attention.

5. Physician before answering call will check for authorization from Relief Medical Officer or assure himself the case is an emergency.

6. Only prescriptions in B.P. or similar formulae will be used.

7. Physician will endorse on relief recipient's identification card the date of the call and the name of the patient and will also sign his name after the entry.

8. The attending physician shall notify the Relief Office of his attendance within 24 hours after having attended same.

9. The City shall provide a form for the physician's report which, along with other data, shall call for an estimate of the attention likely to be required.

10. No further attendance shall be given without authority of the Relief Medical Officer on whom shall rest the responsibility of notifying the physician regarding further attendance.

11. A filing system shall be maintained at the Relief Office (or other convenient place) on which shall be entered details of all medical attention to recipient and his family.

12. A medical referee shall be appointed in the person of the Relief Department physician and the Medical Advisory Board composed of the City Medical Health Officer or his representative, the Relief Department physician and two physicians selected from a panel to be submitted by the Winnipeg Medical Society.

13. The duty of the medical referee shall be to decide as to the need for further attendance on the patient and such other matters as may be referred to him.

14. The duty of the Medical Advisory Board shall be to advise the Unemployment Relief Committee (or its Chairman) on any matters which may arise in connection with medical relief and the working thereof.

15. Physicians' accounts shall be rendered monthly.

16. The following fees shall be charged by physicians attending relief recipients under these rules:

(a) At office $1.00
(b) At home $1.50
(c) At hospital ..... $ .75
(d) A monthly maximum of $100.00 to be allowed any one physician, provided that this maximum may be increased in special cases on the advice of the Medical Advisory Board by the Unemployment Relief Committee.
(e) Maternity cases:
At home $20.00
At hospital $10.00

17. Operations (including reasonable subsequent care) when approved by the Medical Advisory Board shall be paid for at a rate provided for in the schedule agreed upon and in the case of an operation not specifically listed in said schedule then at a rate to be established by the Medical Advisory Board and approved by the Unemployment Relief Committee; no such fee to exceed $50.00.

18. The Unemployment Relief Committee may take full advantage of the services of the City's Health Department and its present associate physicians and of its own relief doctor.

19. The medical profession shall by means of a committee or otherwise give every assistance to the Unemployment Relief Committee in preventing and arresting abuses and in promoting the smooth working of this agreement.

20. Any case of abuse of this agreement by any member of the medical profession may be referred to the College of Physicians and Surgeons of Manitoba for necessary action.

21. It is understood that this is an experiment and its continuation will depend on the co-operation of the medical profession and the recipients of medical relief, and that should the burden of cost of this plan prove excessive the whole matter will be reviewed and modified to meet the situation.

"B"

PANEL "A" includes doctors desirous of taking all calls received (may be called by City Relief Officer).

PANEL "B" includes doctors desirous of taking only calls from patients who expressly ask for their services.

PANEL "C" includes doctors who desire to undertake only (1) ordinary office consultations, and (2) to act in a consultant capacity in office, home or hospital.

The name of any doctor may appear on both panels "B" and "C", if he so desires.

An agreement is being prepared, which each doctor who puts his name on the panel will be asked to sign.

There are many details with regard to the scheme which, no doubt, will have to be ironed out as the result of experience. There are one or two points of possible misunderstanding which might be discussed. The first is with regard to the case where a doctor has done sufficient work to pay him his full month's allowance of one hundred dollars. In this case he will require to continue his services for that particular month. This is a situation which is not likely to arise often, but it may develop in isolated instances. Another point is with regard to certificates for patients. It is requested that medical men do not give to patients certificates stating that they are unfit for work. A report, if thought desirable, may be sent to the Relief Medical Officer, Dr. Howard Harvey, stating the opinion of the practitioner with regard to this point, but it is requested that no certificate be given to the patient. A similar policy should be adopted with regard to orders for extra milk supplies. These should be referred to Dr. Harvey as well.

This plan, as constituted, has, as an essential requirement for its efficient working, the fundamental principle that the authorities are relying on the integrity of the medical profession. It is confidently expected that all members of the profession will "play the game" and it is apparent that the machinery available would deal effectively with any doubtful cases.

The scale of fees, of course, is not an economic return for the doctors' services, but this is purely an emergency measure. It is obvious that the schedule accepted at present is so low that the providing of medical services to people "on relief" will remain an unwelcome burden to many members of the profession.

It was at a meeting on November 18th, 1932, that the medical profession of Greater Winnipeg finally decided that it could not continue to provide at its own expense, medical services for citizens in receipt of relief funds and who were in effect, wards of the state. An agreement was finally reached with the City of Winnipeg on January 31st, 1934, and was arranged to be put into effect on February 21st, 1934. In the intervening months the Special Relief Committee of the Manitoba Medical Association and the Winnipeg Medical Society has held innumerable meetings and conferences, has sent out hundreds of letters, prepared articles for the daily press and reported to various meetings of medical societies and hospital staffs. All members of the committee have contributed freely of their time and energy, but the chairman, Dr. E. S. Moorhead, undoubtedly carried a tremendous burden of responsibility and has been untiring in his efforts, while the secretary, Dr. Alexander J. Swan, has been responsible for the mass of records and correspondence.

C. W. MACC.

Reformers and the Medical Profession

By kind permission of the Editor of the *Canadian Medical Association Journal* we have been publishing reports with regard to the economic position of the medical profession in the various Western Provinces. It will be seen that, in the provinces of Saskatchewan, Alberta and British Columbia the profession has been attempting to arrange with the governments some temporary medical service for people "on relief." It is also apparent that, to varying degrees, there is a tendency on the part of these governments to favor the introduction of some form of health insurance, and, in the report from Alberta, it is stated "it is expected that during the coming session of the legislature this subject will be brought forward *with the avowed intention of placing every physician in this province under the jurisdiction of the Provincial Government.*" The italics are ours. The situation in Manitoba is very much the same, with the difference that, although something is being heard from political parties about so-called state medicine and health insurance, there is no sign that it is likely to become a practical problem in the immediate future.

It is difficult to estimate the reaction of the members of the profession to these proposals. In an editorial in the *Bulletin of the Vancouver Medical Association,* reprinted in the *Canadian Medical Association Journal,* the following statement occurs:— "For good or evil, the feet of our civilization are set on the path that leads to socialization of every department of life. *For ourselves, we are frank to say that we think it is for good.*" Again the italics are ours.

Each member of the profession will naturally formulate his own opinion about the situation. It is doubtful what ultimately will be the considered opinion of the whole profession. It is probable, however, that some discussion about the matter at the present time may be useful.

In this connection, the first point that might be suggested is that the medical profession, as such, is not concerned with forms of social structure or systems of government. We may be in the midst of far-reaching changes in the social, economic and political structure of our country. While the profession will naturally be prepared to accept these changes, even a superficial knowledge of history probably will not encourage us to be unduly enthusiastic about their value. Most of the institutions or forms of government, which are now being widely blamed as the cause of all the difficulties of the present period, have in former years been as widely acclaimed as the many new "isms" which enthusiastic reformers are now attempting to force upon the public. During the present period of re-adjustment following a great war it is inevitable that impatient reformers should be seeking for some radical formula which will clear away all our difficulties with one sweeping stroke. Changes will, no doubt, take place in all our institutions. Yet, the contention may reasonably be submitted that it is not the business of the medical profession, as such, to actively identify itself with hastening or retarding changes in the general structure of our country, but rather to keep in mind the fundamental principles of the profession, and apply these to the conditions in which we may happen to find ourselves.

Medicine is still a liberal profession. Judging by the tone of some of these discussions, the question we may have to decide soon is whether or not we should throw away our position as a liberal profession and join the ever-increasing army of civil servants. Before doing so there are some factors which we might do well to keep in mind. Is it likely that a state controlled medical service will care for the health of the people as well as a liberal profession? Does our observation of other enterprises controlled by the popularly elected governments, and our knowledge of the complexities of medical practice, encourage us to believe that it will? Does our experience suggest to us that governments will have the knowledge necessary to maintain high ethical and scientific standards in medical practice? These are questions which should be kept in mind before rushing in to commend any attempts at socialization of medical practice. The application of the principles of scientific medicine to varying conditions is difficult and cannot be made subject to rules and regulations. Further, if our governing bodies wish to attempt experi-

ments in socialization of services, there is no reason why they should not make their first tentative experiments with activities such as agriculture, law, or the daily press.

There is one point which can be discussed as a practical problem at present. When the present difficulties with regard to medical service for citizens "on relief" developed it became apparent that there was no body in Manitoba which could authoritatively represent the considered opinion of the whole medical profession. In this province a committee representing the Winnipeg Medical Society and the Manitoba Medical Association was formed, and this committee has been reporting to meetings of the general profession not confined to the memberships of these two organizations. Up to the present the committee has received the full support of the whole profession, and appears to fairly well represent the crystallized opinion of the medical men. It is obvious, however, that this is only a temporary arrangement. As negotiations with governmental and other public bodies may increase in the near future, it would seem reasonable to suggest that an attempt should be made by the medical profession to form some permanent representative body. It would need to be a body which would represent the opinion of all members of the profession, and in which the special interests, such as teaching, hospitals, public health, etc., would be adequately and in due proportion represented. In the June and August numbers of this publication this question was discussed in two articles by Dr. F. D. McKenty. It is suggested that this is a question of fundamental importance to the medical profession, and should not only be considered by everyone but also should receive free discussion in meetings and through the journals. If the negotiations with the governments had produced no tangible results in the way of the provision of proper medical services for the unemployed "on relief" they would have been worth while if they teach the medical profession the value of proper representative organization. If some such representative body is built up it will be in a position to advise the governments and see that, in any changes that are proposed in the practice of medicine, the interests of the public and the profession are adequately safeguarded. The Medical Service Committee of the College of Physicians and Surgeons and the Manitoba Medical Association in 1931 brought in a report which, in one of its chief recommendations, supported this viewpoint.

It is to be hoped that, in this period of readjustment, the medical profession may watch with detached interest the progress of events, and yet be ready to adapt the fundamental principles of medical practice to any changes that may develop in the general economic, social and political life of our country. Above all, it is to be hoped that medical men will not be unduly influenced by the gratuitous advice of people, who feel that lack of knowledge of the complexities of medical practice does not disqualify them from attempting to radically change the conditions under which the medical profession carries on its work.

C. W. MacC.

WINNIPEG GENERAL HOSPITAL STATISTICS

	January 1933	January 1934
Number of Outdoor Patients	1,377	124
Number of Outdoor Consultations	5,935	713
Number of Public Indoor Patients	778	651

NEWS ITEMS

DEPARTMENT *of* HEALTH and PUBLIC WELFARE

The following is the second and final instalment of an article published in the *Health Examiner*. The first instalment was published under "News Items" in the January-February issue of the *Review*.

Maternal Mortality in New York City

CAUSES OF DEATH

It may be well to give a brief summary of the causes of death found in this series. There were 357 deaths following abortion. This figure must, of course, be questioned, as any consideration of the subject of abortion is necessarily a most inaccurate and unsatisfactory one. Wilfully false reporting is all too common and the actual number of cases lies wholly in the realm of conjecture. Of the 357 deaths, 262 were found to be septic deaths. Forty-seven were therapeutic abortions and of these 32 were considered preventable. There was a tendency for the attendant to postpone the operation until the patient's condition was beyond the hope of improvement.

One hundred and twenty deaths followed ectopic gestation. As 74.2 per cent. of these cases were judged preventable, it was evident that many of those patients did not receive competent care. Better knowledge and accuracy in diagnosis with increased appreciation of the necessity for transfusion as an accessory to the operative treatment of ectopic gestation should serve to diminish appreciably the deaths from this cause. With this should go proper instruction of the woman in the possible gravity or symptoms which at first may seem mild in character.

Hemorrhage deaths constituted 197 of the group. Of these, 49 followed placenta prævia and 31 premature separation of the placenta. Many factors contributed in causing these deaths. There was repeatedly failure to employ all the available procedures to control and combat hemorrhage. Omission of tamponade or of transfusion was frequent. Minimizing the gravity of bleeding during pregnancy both by the patient and by the attendant was noticeable. The conduct of the delivery was frequently improper. Rapid traumatizing operative delivery, such as version, followed immediately by extraction, was frequently encountered in this series.

The total number of deaths from septicemia (excluding those following abortion and ectopic gestation) was 510, which is 25 per cent. of these deaths, giving a septic death rate of 1.46 per 1000 live births. This rate was almost twice as high in the Negro as in the white, and the same was true of the foreign-born when compared with the native-born. It was approximately five times as high following operative delivery as in spontaneous, and about twice as high in cases delivered in hospitals as in those delivered at home.

As might be imagined, it was extremely difficult to determine the factors which influenced this high septic rate. It was obvious that in many cases there was a breach in the aseptic technique of the attendant or of the assistants. The frequent lack of masking by those attending the patient probably also contributed. In operative delivery the length of time the membranes had been ruptured and the total duration of the labor had to be taken into account. A realization by the practitioner of the danger of prolonged labor would make for more frequent and earlier consultation with the specialist, with a possible saving of human life.

Two hundred and thirty-one women died of albuminuria and eclampsia. This classification includes only those kidney and liver disturbances which arise directly as the result of pregnancy and not true nephritis, chronic or acute. Since the cure of this condition lies in prevention, it is not unexpected that only 26 per cent. of these cases had had adequate prenatal care. Among the 29 per cent. of the preventable deaths for which the attendant was held responsible, the largest proportion was among those patients having operative delivery. In view of the fact that non-intervention, with all treatment directed toward combating the toxemia without regard for the onset of labor, is now accepted as the most effective method of handling a case of eclampsia, the number of cæsarean sections and inductions done was significant of the quality of care these patients were receiving. Further reduction of these deaths, a very large percentage of which can be prevented, will be brought about only by education of women to the vital necessity of putting themselves under supervision early in pregnancy and co-operating scrupulously with the

physician throughout the prenatal period and by assuring to every woman the services of highly trained specialists when those services are needed because of an abnormal development of pregnancy.

There were 28 deaths from pernicious vomiting. Fourteen of these were not delivered, 10 had therapeutic abortions, 3 spontaneous abortions and 1 an induced abortion. Delay in operating upon these cases on the part of the attendant and tendency on the part of the patient to regard this condition as a normal accompaniment of pregnancy were responsible for most of these deaths.

Although the committee was at particular pains to discover whether or not a terminal embolism was associated with some underlying cause such as sepsis, 89 deaths were judged to be due to embolus. It was recognized, however, that even in some of the cases where there was no evidence to indicate its existence, a low-grade septicemia may have, in fact, been present and was in reality the underlying cause of the embolism. Spontaneous deliveries greatly outnumbered operative in this group, 59 to 29; 6 were not delivered.

Under the caption of "Shocks and Accidents of Labor" were grouped all cases in which the death was ascribed to the effects of labor and the accidents occurring in its course, including the shock associated with operative delivery, as well as that arising out of spontaneous delivery and of rupture and inversion of the uterus. In all, 171 women died as a direct result of labor and delivery. Fourteen women were delivered spontaneously, 144 by artificial methods and 13 died undelivered. Sixty-one of the deaths followed rupture of the uterus. Eighty-seven per cent. of the deaths were judged to be preventable and in 90 per cent. of these the responsibility was placed on the physician. Any reduction in the deaths from this cause must be effected through an improvement in the skill and judgment of the accoucheur.

Eight cases were puerperal psychoses in which the exhaustion attendant upon this condition was the actual cause of death.

When all the deaths from strictly puerperal conditions had been considered, there remained a group of deaths, 344 in number, of which the actual cause was a condition not directly connected with the puerperal state but one which was exacerbated by the pregnancy and delivery. Only those in which a definite causal relationship was thought to exist between the death and the pregnant or puerperal state were included in this category. The group was a varied one, including many different diseases. The largest group was that of heart disease, in which there were 99 cases; following this, in importance, were the respiratory infections accounting for 93 deaths. The remaining deaths were caused by various diseases; only 34 per cent. of these deaths were thought to be unavoidable.

Anesthesia

The anesthesia administered was considered the direct cause of death in 20 cases; 7 of these were spinal neocaine or novocaine; 7, ether; 3, gas oxygen and ether; 2 pernocton and 1 avertin. There is a difference in the emphasis on these cases, for while the factor of maladministration did not arise in connection with the deaths caused by spinal neocaine, pernocton and avertin, the deaths from inhalation anesthesias were caused by poor technique on the part of the anesthetist. There were a few additional deaths in which the anesthetic was strongly suspected but the evidence was not convincing enough to justify ascribing the death to the anesthetic alone. It was the opinion of the Committee that before exposing the patient to the additional strain of having been given a profoundly toxic drug, satisfactory indication for its use must be present. Many multiparous labors are of such short duration that the use of an anesthetic becomes unnecessary. The mere alleviation or the entire elimination of pain may be achieved at a cost to mother or infant which should be prohibitive.

Caesarean Section

With the increasing use of all surgical maneuvers, the cæsarean section has grown in popularity and its incidence has greatly increased. Ill advised widening of the indications is partly responsible for the increase. Among all the deaths in this series, 304 died following a cæsarean section and 6 others died while a cæsarean was being attempted. In 67 hospitals, for which we have the detailed figures as to the number and type of deliveries, 3,963 cæsareans were performed and this was 2.2 per cent. of all deliveries. This is an average of wide variants. One of the largest hospitals had an incidence of cæsarean section of 5.3 per cent., while another large hospital had only .4 per cent. cæsarean section. Two hundred and forty-five of the 310 deaths occurred in these institutions, a case fatality of 6.1 per cent. In 22 hospitals the case mortality was over 10 per cent.

The principal cause of death following cæsarean operation was septicemia which occurred in 148 cases; 65 died as the direct result of the shock of the operation; 24 from albuminuria and eclampsia; 23 from hemorrhage; 9 from embolism; 1 from puerperal psychosis, and 40 from various extra-puerperal causes. The indications for the operations were varied, but many were considered by the Committee to be of doubtful validity. The Committee also felt that among the operations there were a large number which could have been avoided had there been proper

care during pregnancy with correct prognosis of labor and delivery, and the avoidance of those developments of labor which makes the cæsarean operation especially hazardous. The classical type of operation was greatly preponderant and it was frequently employed on potentially infected patients. Two hundred and fifty-six of these deaths were considered preventable and it was judged that a great majority of these were the result of faulty judgment and lack of skill on the part of the attendants. In the full report the cæsarean section deaths are analyzed at length and the foregoing is a brief analysis of the findings.

HOME AND HOSPITAL DELIVERIES

After analyzing the home and hospital delivery deaths in the report, the Committee states that the hospital is and will remain the only proper environment for the care and management of the *abnormalities* of pregnancy, labor and delivery. The great increase in the hospitalization of the normal parturient has failed to bring the hoped-for reduction in puerperal morbidity and mortality, and this in spite of great advances in our knowledge of the processes involved and the proper way of treating them. It would seem that the present attitude toward home confinement requires re-examination, and a program looking toward an increase in the practice of domiciliary obstetrics deserves careful investigation.

MIDWIFE PRACTICE

The midwife still attends almost 10 per cent. of the deliveries in New York. At present, there are 863 licensed midwives in the city. There is one school for midwives in New York and another has recently been started for nurse midwives. The law requires the midwife, in order to qualify for license, to be a graduate of a school of midwives which is accepted by the Board of Health, but there are still many midwives in practice who obtained their licenses before this ruling went into effect. No annual reregistration is required, as is the case of physicians licensed to practice in the state. Supervision of the midwife includes a monthly visit by a nurse appointed by the Board of Health who examines her bag and home conditions. The midwife must make quarterly reports to the Board of Health of all cases delivered by her during this period. She must report

births within ten days. She is subject to an investigation in the case of a maternal death. This is the extent of the meagre supervision exercised over her. So long as she does not get into trouble through the misfortunes of a maternal death, she is allowed to go along practically unsupervised.

Fifty-nine midwives, who had either delivered or been in contact with a patient preceding her death were located and interviewed. Nineteen only were judged to be competent. There were 48 deaths of women who had been delivered by midwives. To insure some accuracy in attempting to compare the results obtained by midwives with those obtained by physicians, the cases attended by physicians were considered in two ways: all cases attended by physicians and cases attended by physicians at home. This last group offers the fairer ground for comparison, for the operative and the abnormal deliveries are in very large part conducted in hospitals.

The general maternal death rate for all cases, exclusive of abortions and ectopic gestations, is 4.5 per 1000 live births, while that for cases delivered by the physician at home is 1.9 and for cases delivered by the midwife, 1.6. It is proper to note that not all deliveries attended by physicians at home terminate spontaneously, as do those attended by midwives, and the comparability of the two series is somewhat vitiated. It must, however, be accepted that there is no great disparity in the results obtained under circumstances almost similar. Of the midwives seen and interviewed it is significant and must be borne in mind that less than one-third were judged to be competent and in the face of incompetence or only fair training and ability, the results were by no means prejudicial to the midwife. Proper training is the first requisite and there is an increasing tendency among part of the medical profession to see that it is provided. After proper training there must be suitable, adequate and co-operative supervision and control of that practice.

The medical profession must accept the midwife as one of its adjuncts. Physicians must make themselves responsible for her proper training and supervision. They must regard her as an ally in an effort to reduce the morbidity and mortality associated with childbearing. Both officially and privately there must be an alteration in the prevailing attitudes toward her. There must be a readiness to co-operate with her to insure the results both physician and midwife are

anxious to achieve.

CONCLUSIONS AND RECOMMENDATIONS

To improve this situation and remove the causes out of which it arises, it is evident that there must be a determined effort to educate both the lay public and the medical profession to an understanding of the necessity for a change in certain of the methods now employed. The profession itself must accept the responsibility for educating the lay public to a better understanding of the aims of obstetrics and the methods by which these aims may be realized. But prior to that must come increased education of the profession, that it in turn may wisely inform the lay public.

A prospective mother must have further instruction in the necessity for prenatal care. She must be taught that this does not mean merely registering for confinement; that it is imperative to obtain that care as early as pregnancy is suspected; that one visit at which no abnormalities were discovered is no guarantee of continuing good health but that regular return for observation is vital if her attendant is to be enabled to give her the best possible care; that previous normal pregnancies and deliveries do not assure subsequent normal ones; that proper and sufficient prenatal care offers her the greatest assurance of an uneventful confinement.

Furthermore, some information must be made available to the patient as to the standard of such prenatal care. She should know that the omission of urinalysis, blood pressure determination, or measurement of her pelvis constitutes negligence; that a thorough physical examination is a necessary part of proper care.

The medical profession is obligated to inform the lay public that operative delivery undertaken merely to alleviate pain or shorten labor involves increased risk for both mother and baby.

To accomplish this education the medical profession must assume a role which heretofore has been left to lay organizations. The confidence of the lay public in the medical profession enables this to be done with greater authority and increased chances of success.

If the doctor is to be a useful teacher he must himself be properly educated. The education must start with the medical student. It has been repeatedly asserted that the medical schools do not now provide sufficient training in normal obstetrics. They must do so. But they have a further obligation: to inform the student that the training which he receives does not qualify him to practice as a specialist in obstetrics. The medical profession must insist that prolonged graduate study is necessary for specialization.

If such education is to be demanded of the practitioner of medicine, facilities for obtaining it must be made available. Such facilities are strikingly lacking today. Hospitals must be prepared to receive these men as internes in order that they may have the opportunity of using clinical material. Medical schools should offer courses to the practitioner.

If the practitioner is to confine his activities in obstetrics to normal deliveries, far more consultations will be required. Earlier and more frequent consultations with the highly trained specialist should be more freely resorted to.

Hospitals, in order to qualify for recognition by the controlling authorities must have qualified obstetricians as directors of their staffs.

All hospitals must maintain separate delivery rooms where only obstetrical cases are treated. The rules for the maintenance of asepsis must be rigid, including masking, the importance of which deserves reemphasis. Isolation must conform to the most stringent regulations.

Proprietary hospitals should be brought under the supervision of a responsible board of hospital control and unless they provide adequate facilities, they should not be permitted to accept obstetrical patients.

The situation in regard to midwives must be altered. Licensure should be based upon examination. Supervision should be increased and changed to include actual oversight of cases under care. The physician must be prepared to give the midwife unqualified co-operation.

The hazards of childbirth in New York City are greater than they need be. Responsibility for reducing them rests with the medical profession.

COMMUNICABLE DISEASES REPORTED

Urban and Rural : January, 1934

Occurring in the Municipalities of:—

Chickenpox: Total 262 — Winnipeg 148, Blanchard 45, Brandon 24, St. James 11, Fort Garry 10, Winnipeg Beach 9, Kildonan W. 5, Hamiota 3, Kildonan East 2, Birtle Rural 1, Ethelbert 1, Hanover 1, St. Vital 1, Whitehead 1.

Measles: Total 248—Winnipeg 228, St. James 13, St. Boniface 3, Boulton 1, Carman 1, Kildonan East 1, St. Vital 1.

Scarlet Fever: Total 86—Winnipeg 29, St. Andrews 6, Gilbert Plains T. 5, Gilbert Plains R. 4, Rhineland 4, St. Boniface 4, Lorne 3, Morton 3, Stonewall 3, Argyle 2, Brenda 2, Brandon 2, Dauphin T. 2, Brokenhead 1, Cypress North 1, Gladstone 1, Kildonan East 1, Minitonas 1, Montcalm 1, Mossey River 1, Rockwood 1, Roland 1, Rosser 1, Shell River 1, Springfield 1, Strathclair 1, Ste. Anne des Chenes 1, St. James 1, St. Vital 1, Victoria Beach 1.

Whooping Cough: Total 80—Winnipeg 40, Dauphin T. 10, Brokenhead 6, Beausejour 5, Siglunes 4, Minnedosa 3, Saskatchewan 3, Gilbert Plains T. 2, Gilbert Plains R. 2, Kildonan West 2, Boulton 1, Brooklands 1, St. James 1.

Diphtheria: Total 49—Winnipeg 34, Hanover 4, Dauphin T. 3, Roland 2, Strathclair 2, Swan River T. 2, Kildonan East 1, St. Vital 1.

German Measles: Total 20—Unorganized 20.

Mumps: Total 19—Winnipeg 12, St. Vital 6, St. Boniface 1.

Tuberculosis: Total 15—Winnipeg 9, Unorganized 2, Gladstone 1, Rockwood 1, Strathcona 1, Victoria Beach 1.

Diphtheria Carriers: Total 7—Winnipeg 7.

Erysipelas: Total 5—Winnipeg 3, Arthur 1, St. James 1.

Influenza: Total 2—Brandon 2.

Puerperal Fever: Total 2—Winnipeg 1, Winnipegosis 1.

Typhoid Fever: Total 2—Hanover 1, Morden 1.

Venereal Disease (Manitoba) — Gonorrhoea 94, Syphilis 41. Total 135.

‡ ‡ ‡ ‡

DEATHS FROM ALL CAUSES IN MANITOBA

for Month of November, 1933

Urban — Cancer 29, Pneumonia (all forms) 18, Tuberculosis 4, Influenza 3, Lethargic Encephalitis 3, Puerperal 2, Whooping Cough 2, Typhoid Fever 1, other causes under one year, not included elsewhere, 16; all other causes 111, Stillbirths 17. Total 206.

Rural—Pneumonia (all forms) 19, Tuberculosis, 19, Cancer 13, Influenza 6, Diphtheria 3, Puerperal 2, Whooping Cough 1, other causes not included elsewhere, under one year of age, 30; all other causes 122, Stillbirths 19. Total 234.

Indians—Tuberculosis 8, Pneumonia (all forms) 7, Influenza 1, all other causes under one year, not included elsewhere 3. Total 19.

WESTERN CANADA MEDICAL HISTORY

Through the kindness of Dr. A. J. Douglas, the Health Officer for Winnipeg, and Dr. D. A. Stewart, we are able to present the following letter which bears on the health of the Red River Settlement in 1843. Mr. Duncan Finlayson became Chief Factor of the Hudson's Bay Company in 1832, and was Governor of Assiniboia, the district lying within a fifty mile radius from the forks of the Red and Assiniboine, from 1839 to 1844.

COPY

Fort Garry Red River Settlement,
2nd December, 1843.

To
The Govn. Chief Factors,
and Chief Traders.

Gentlemen:

There is nothing beyond our usual transactions to communicate to you on the Company's affairs this season. We have procured the necessary supplies of farm and plain produce for general service, next Summer, and our prospects of collecting such Returns, as may be expected from this place, are not discouraging. But I am exceedingly sorry to say that the health of the Settlement has been, and is still, very indifferent.

The Scarlet Fever, which appeared here, about the middle of last Summer, has proved very fatal, more especially to the younger branches of the Population, and if its progress be not providentially arrested, the consequences will, I am afraid, be yet more serious.

With much regard, I am
Gentlemen,
Yr. mo: obed: Servt.
(Signed) DUNCAN FINLAYSON.

Case Report Mrs. X

HOUSEWIFE — AGE 43
[History obtained from Husband]

Tonsillectomy Feb. 4, 1933.

Four days later she passed a stone the size of a grain of wheat, by urethra. Following that she made a fair recovery, was up and about and ran her house as usual, but never felt really well.

After about a week her husband noticed that she was confused at times. Spoke queerly and did not seem to know where she was. These spells were intermittent, but became gradually worse. He next noticed that she stumbled a great deal with her right foot; next that her right hand seemed weak and that she often dropped things from it. By the 3rd week in March she was definitely abnormal mentally and had difficulty in speaking.

Physicians made a diagnosis of hysteria and advised a trip.

She was first seen by me on April 3, 1933. She was stuporous then. Could be roused and was co-operative; was aphasic and had a right sided spastic hemiplegia including the face. There were pyramidal signs in both the limbs of the left side as well, with a positive bilateral Babinski. I could not be sure whether there was an objective sensory loss over the right side or not. My impression was that appreciation of pin pricks was defective on the right side of the body. Spontaneous nystagmus was present.

The fundi were normal except for a gross refractive error. The other cranial nerves were normal.

She was moved to the hospital that night and the temperature found to be elevated.

The next day there was defective upward rotation of the eyes. The extraocular palsy increased until she had a complete external ophthalmoplegia.

She continued to run a swinging temperature until the time of her death. April 5, 1933, tonic perseveration of the left hand was noted.

On April 4, 1933, the C.S.F. showed a pressure of 220 mm H_2O, lymphos 12, globulin increased and negative W.R. Two days later the C.S.F. showed a pressure of 80 mm H_2O, 8 lymphos, increased globulin chlorides .76 and sugar o.o1.

The only information of interest as regards previous illnesses was that she had been subject to severe attacks of occipital headache which radiated down the back of her neck, ever since girlhood.

PATHOLOGICAL FINDINGS

Cranial Cavity.

The surface shows marked convolutional flattening and obliteration of sulci. There is a tumour the size of a plum involving both basal ganglia, greyish-pink in colour, soft, and showing areas of hæmorrhage. It is well demarcated. There is well marked hydrocephalus. There is an area of hæmorrhage in the pons.

Microscopical Examination.

The tumour shows the structure of a spongioblastona (glioma).

Note.

A most interesting point in this case is the association of extreme shortness of the history with an extensive lesion. The terminal symptoms were apparently due to hæmorrhage, and the temperature was caused by the pontine hæmorrhage.

Comment.

The clinical picture suggested increased intracranial tension. There was evidence of bilateral pyramidal system involvement, which was much more marked on the right than on the left. Tonic perseveration was present in the left upper extremity. There was progressive extraocular palsy.

These signs suggested bilateral cerebral lesions; and the presence of an elevated temperature seemed to make the diagnosis of Encephalitis likely. This diagnosis was made. The autopsy findings, however, explained the pyrexia on another basis—namely, hæmorrhage into the Pons.

Another interesting point in this case were the spinal fluid pressures. The second reading was well within normal limits, yet there was internal hydrocephalus present.

Subsequent to the death of the patient, a history of transient attacks of weakness of the right hand was obtained. These were noticed some months before the tonsillectomy on February 4th, 1933. Had this history been obtained before, it would have made the diagnosis of encephalitis less probable, and may have made us think more seriously of a single expanding lesion involving the pons.

—G. L. ADAMSON.

Forty Years Ago—December 21, 1893

Among those attending the Medical's banquet in the Manitoba hotel were Drs. A. H. Ferguson, O'Donnell, McDiarmid, Porter, Higginson, McArthur and Drs. Montgomery and Cook, of Manitou.—*Manitoba Free Press.*

Manitoba Medical Association

MINUTES OF EXECUTIVE MEETING

Minutes of a meeting of the Executive of the Manitoba Medical Association, held in the clubrooms of the Medical Arts Building, on Thursday, February 8th, 1934, at 6.30 p.m.

Present.

Dr. J. C. McMillan, Chairman; Dr. F. G. McGuinness, Dr. G. W. Rogers, Dr. W. W. Musgrove, Dr. C. W. Wiebe, Dr. F. A. Benner, Dr. Ross Mitchell, Dr. F. W. Jackson, Dr. R. R. Swan, Dr. A. F. Menzies, Dr. J. D. Adamson, Dr. T. A. Pincock, Dr. H. O. McDiarmid, Dr. C. W. MacCharles.

Present by Request.

Dr. F. D. McKenty and Dr. A. J. Swan.

Following dinner, the Chairman called the meeting to order at 7.15 p.m. Minutes of the last full Executive meeting, held October 23rd, 1933, were read by the Secretary and approved.

Workmen's Compensation Board.

Dr. F. D. McKenty, Chairman of the committee appointed to negotiate a revision of the fee schedule with the Workmen's Compensation Board, submitted his report. He advised that, after several sessions with the medical officer and assistant commissioner of the Board, a new schedule had been finally arrived at, which, in the opinion of the committee, was satisfactory. Dr. McKenty stated that the Board was anxious to begin the new schedule for 1934, and asked that it receive the approval of this Executive. (Copy of committee's report and schedule of fees on file).

The matter of a revision in the working of the Referee Board was brought up. Dr. McKenty advised that the original intention had been that this Executive make an appointment each year. This, however, had not been done, and the same chairman had been acting on the Board for a number of years. It was felt that the necessity of having a member serve on the Board for at least two years, before being appointed chairman, was obvious, and that a three-year term for members would be suitable. It was suggested that this Executive appoint two members—one senior and one junior—the senior member to continue for one year, and the junior for two years; and that one appointment be made each subsequent year. This arrangement would give the member at least one or two years' previous experience before becoming chairman. Should Dr. Fraser desire a special board, he could request the junior member to retire for that particular case, and appoint another man in his place. This matter was to be discussed with the Compensation Board before being put into effect.

It was moved by Dr. J. D. Adamson, seconded by Dr. H. O. McDiarmid: That the report, with the above alterations, be accepted.

—Carried.

Further, it was moved by Dr. A. F. Menzies, seconded by Dr. G. W. Rogers: That Dr. W. W. Musgrove and Dr. R. R. Swan be a committee to make this appointment with the Workmen's Compensation Board, if required, before the next Executive meeting.

—Carried.

Hospital Section of the Winnipeg Medical Society.

Dr. F. D. McKenty submitted a proposal as to the necessity of the organized bodies of medicine in Manitoba to be linked, and suggested the formation of a Hospital Section of the Winnipeg Medical Society, facilitating communications and securing uniformity of action, particularly between the hospital staffs and the district societies.

Manitoba Medical Association Review.

The Secretary read extract from the minutes of the last special meeting of the Executive, held December 5th, 1933, regarding suggestions for obtaining new prices on printing the *Review*, and arrangements regarding advertising.

Dr. C. W. MacCharles advised the meeting that his committee had been negotiating with a Mr. J. G. Whitley to take over the advertising in the *Review*. There had been a suggested change in the size of the publication, which is more suitable for advertising purposes, the new size to cost slightly more per page. So far, no formal agreement had been drawn up with Mr. Whitley, and the matter rests with the Executive for approval. Dr. MacCharles suggested that, if the present arrangement did not work out satisfactorily, we should discontinue the publication altogether, as it had been simply a millstone of expense to the Association.

Following discussion, it was moved by Dr. F. A. Benner, seconded by Dr. H. O. McDiarmid: That the *Review* continue to be published; that the new plan be adopted and the proposed arrangements with Mr. J. G. Whitley accepted, and that Dr. C. W. MacCharles and his committee be congratulated on the work they have done.

—Carried.

Radio Broadcasts on Ophthalmology.

Dr. A. J. Swan, who was present to discuss the above matter, stated that a resolution had been passed by the Eye, Ear, Nose and Throat Section of the Winnipeg Medical Society, which

had now been referred to this Executive, registering a strong protest against the weekly broadcasts on Ophthalmology and the anatomy of the eye, by an optician unqualified to speak on the subject. Dr. Swan advised that, this being a Provincial matter, it was thought it should be dealt with by the Manitoba Medical Association, along with other broadcasts on medical matters.

During discussion of the subject, Dr. Mitchell stated that a similar thing had occurred previously, when it had been suggested that the Commissioner be interviewed regarding a chiropractor who was giving broadcasts. Mr. Lowry had been seen, and the committee received very favorably, and the gentleman in question had been advised that he could not give further programmes.

It was moved by Dr. R. R. Swan, seconded by Dr. J. D. Adamson: That Dr. A. J. Swan and Dr. Ross Mitchell be appointed to interview Mr. J. E. Lowry, Commissioner of the Manitoba Telephone System, on the matter. —Carried.

Unemployment Relief.

Dr. A. J. Swan, who was present to report on the above matter, advised the meeting of the progress made by the Special Relief Committee to date. Copies of a suggested "Compromise Plan," as submitted by the City of Winnipeg, were passed around.

Dr. McMillan stated that, as soon as a definite scheme was in operation in the City, the next step would be to work out a suitable arrangement for the rural districts.

It was moved by Dr. H. O. McDiarmid, seconded by Dr. A. F. Menzies: That a vote of confidence be moved by this Executive for the work that has been done in this connection. —Carried.

Re. Sun Life Assurance Co.

The Secretary read letter received from Dr. T. C. Routley, under date of February 1st, asking that a letter be addressed to the President and Directors of the Sun Life Assurance Company, from this Association, indicating to what extent the post-graduate lectures had been appreciated; also that similar letters from the district medical societies be obtained and forwarded together to the Canadian Medical Association. Dr. Routley advised that it was the intention to put all this correspondence together in the form of a volume and, at an appropriate time, present them to the Sun Life Assurance Company.

It was moved by Dr. Ross Mitchell, seconded by Dr. G. W. Rogers: That the necessary letters be procured and forwarded to Dr. Routley as soon as possible. —Carried.

Fees for Medical Services to Inmates of Govt. Institutions.

It was reported that Dr. MacKenzie's committee, appointed re. the above matter, had waited on the Department of Health and

Public Welfare and the Attorney-General's Department of the Provincial Government. The Department of Health and Public Welfare had agreed to the request, and the Attorney-General's Department had promised to give the committee a definite answer within a short space of time. This, however, had not yet been received. The committee is still active, and will see what can be done in the matter.

Jubilee Anniversary of Medical College.

Dr. Musgrove advised that a tentative outline of the progrmme for this celebration, to be held in May of this year, had been prepared, and that it was hoped to make that week the most outstanding clinical week ever held in Manitoba. The College of Physicians and Surgeons had donated $1,500.00 towards the cost, if needed, but it would cost considerably more than this amount. Dr. Musgrove asked that both the moral and financial assistance of the Manitoba Medical Association be granted, and that a donation of at least $500 be made, if possible.

Discussion followed as to whether it would be advisable to hold the Annual Meeting of the Association at the same time. Opinions varied. It was felt that it would not be amiss to have two meetings, as the Annual Meeting would be at least four months afterwards, and if a good clinical programme were arranged it would be appreciated by the profession at large.

It was moved by Dr. J. D. Adamson, seconded by Dr. C. W. Wiebe: That the Annual Meeting of this Association be held in September, 1934, in the usual way, and that the exact dates be set by the Executive. —Carried.

Financial Statement for 1933.

Dr. McGuinness read the financial report and statements of the Association for the year ending December 31st, 1933, showing a deficit of $311.58 of expenses over revenue. He stated that he would like very much to support Dr. Musgrove's suggestion to assist in the Jubilee Celebration, but that the Association's revenue was consistently decreasing, necessitating the disposing of reserves to meet current expenses.

It was moved by Dr. F. G. McGuinness, seconded by Dr. R. R. Swan: That this Executive appoint a committee of three to consider the finances of the Association for the present year, and that they, at the same time, study the question of a donation to the Jubilee Celebration of the Manitoba Medical College, and that they be authorized to donate up to an amount not to exceed five hundred dollars ($500.00), if they see fit, and that they report back as soon as possible, if only to the Winnipeg members of this Executive.
—Carried.

The following committee was appointed: Dr. F. G. McGuinness, Dr. J. C. McMillan, Dr. C. A. MacKenzie.

Rural Rehabilitation Commission.

The Secretary advised that a schedule of fees had been prepared and approved for country practitioners, covering treatment to families placed back on the land by the Rural Rehabilitation Commission. He advised that a few cases were coming into the City for treatment, and that Mr. R. J. Shore, Supervisor of this agreement, had asked if the same fees would apply to City doctors.

It was moved by Dr. R. R. Swan, seconded by Dr. F. A. Benner: That the same schedule of fees be accepted. —Carried.

Friedman Test for Pregnancy.

Letter from Prof. A. T. Cameron, Secretary of the Medical Research Committee of the University of Manitoba, under date of Feb. 1st, was read by the Secre-

tary, asking if the Association would consider making a grant of $50.00 towards defraying the expenses in connection with this work. Prof. Cameron stated in his letter that there would be no difficulty in financing, if the present rate of demand for the test continues, but, after paying the necessary expenses, too low a margin was left for safety, should the number of tests lessen for a period.

It was moved by Dr. Ross Mitchell, seconded by Dr. G. W. Rogers: That this Association underwrite Prof. Cameron's work to the extent of fifty dollars ($50.00), to be given only when a proper statement of receipts and expenses has been presented, and the need of the money shown, but that, in the meantime, the matter be referred to and left in the hands of the finance committee previously appointed at this meeting. —Carried.

Debt Adjustment Act.

The Secretary read letter from Dr. R. L. Ross of Morris, Manitoba, under date of Nov. 13th, 1933, stating that the struggle country practitioners were having in collecting their accounts was considerably augmented by the workings of the Debt Adjustment Act. Practically all were hiding under this protection. Dr. Ross gave good examples and asked if the Association could not take this up with the Government in an endeavor to have physicians exempt from the workings of this Act.

It was moved by Dr. J. D. Adamson, seconded by Dr. C. W. Wiebe: That this letter be referred to the Legislative Committee for their action. —Carried.

Canadian Medical Institute Health Examinations.

The Secretary advised that, under the original plan for periodic health examinations, the assured could have examinations made by his family physician, but, under the present working, the Insurance Companies, when sending out letters to the policy holders, attach a list of physicians to whom he may go, this list being the Company's own examiners; also, it was not always stated that a policy holder may apply to have the examination done by his own physician. Copy of a proposed letter, drafted by Dr. A. P. MacKinnon, President of the Winnipeg Medical Society, was read and discussed. The general opinion of the meeting was that we should back this letter up and forward same to the Canadian Medical Association.

H. E. SELLERS
President.

C. E. GRAHAM
Sec'y-Treas.

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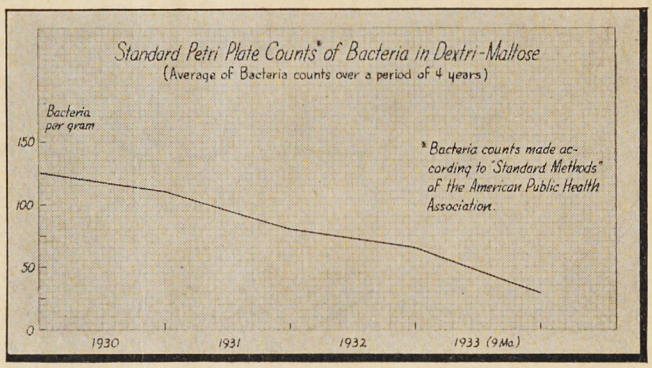
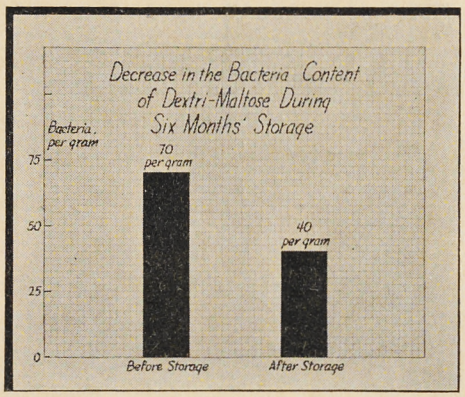


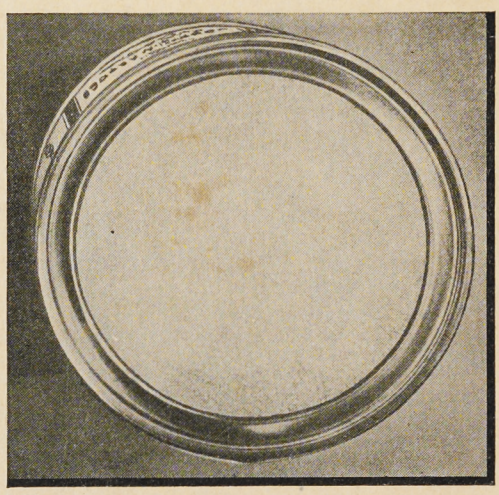


Its bacteria count decreases during storage

A representative sample of Dextri-Maltose, which to start had a low bacteria count of 70 per gram, revealed a count of only 40 per gram after standing for 6 months at room temperature. During this period the container was opened 12 times for biweekly sampling, without any special precautions being taken to prevent contamination. Yet the bacteria count actually decreased.

It will not support bacterial growth even after inoculation

The tin of Dextri-Maltose shown at right was inoculated with the thrush organism, a common dust-borne fungus. At the end of 17 days the Dextri-Maltose was free from visible growth. This is explainable by the fact that bacteria, yeasts, and fungi require moisture for reproduction—and the moisture content of Dextri-Maltose is extremely low, only 5 per cent. It is safe to say that no baby can be infected with thrush or other organisms from Dextri-Maltose, *per se*.



DEXTRI-MALTOSE
clean — not cleaned

Please enclose professional card when requesting samples to cooperate in preventing their reaching unauthorized persons.

Mead Johnson & Co. of Canada, Ltd., Belleville, Ont.